


STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☒

APPLICATION FOR PERMIT TO DRILL				1. WELL NAME and NUMBER Archy Bench 11-22-11-2		
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				3. FIELD OR WILDCAT BITTER CREEK		
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO				5. UNIT or COMMUNITIZATION AGREEMENT NAME		
6. NAME OF OPERATOR Enduring Resources, LLC				7. OPERATOR PHONE 303 350-5114		
8. ADDRESS OF OPERATOR 475 17th Street, Suite 1500, Denver, CO, 80202				9. OPERATOR E-MAIL aarlian@enduringresources.com		
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ML-47075		11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		12. SURFACE OWNERSHIP FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		
13. NAME OF SURFACE OWNER (if box 12 = 'fee')				14. SURFACE OWNER PHONE (if box 12 = 'fee')		
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')				16. SURFACE OWNER E-MAIL (if box 12 = 'fee')		
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')		18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>		19. SLANT VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	523 FNL 638 FWL	NWNW	2	11.0 S	22.0 E	S
Top of Uppermost Producing Zone	523 FNL 638 FWL	NWNW	2	11.0 S	22.0 E	S
At Total Depth	523 FNL 638 FWL	NWNW	2	11.0 S	22.0 E	S
21. COUNTY UINTAH		22. DISTANCE TO NEAREST LEASE LINE (Feet) 523		23. NUMBER OF ACRES IN DRILLING UNIT 40		
		25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 1486		26. PROPOSED DEPTH MD: 7750 TVD: 7750		
27. ELEVATION - GROUND LEVEL 5081		28. BOND NUMBER RLB0008031		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 49-222		

ATTACHMENTS**VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES**

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input checked="" type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP
NAME Alvin Arlian	TITLE Landman-Regulatory
SIGNATURE	DATE 12/30/2008
PHONE 303 350-5114	EMAIL aarlian@enduringresources.com
API NUMBER ASSIGNED 43047501840000	APPROVAL  Permit Manager

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Cond	20	14	0	40		
Pipe	Grade	Length	Weight			
	Grade J-55 Casing/Tubing	40	36.0			
	Grade J-55 ST&C	2000	24.0			
	Grade N-80 LT&C	7750	15.1			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	40			
		Cement Description	Class	Sacks	Yield	Weight
			Class A Cement	99	3.3	14.3
	Cement Interval	Top (MD)	Bottom (MD)			
		0	2000			
		Cement Description	Class	Sacks	Yield	Weight
			Premium AG300	276	3.5	11.1
	Cement Interval	Top (MD)	Bottom (MD)			
		0	7750			
		Cement Description	Class	Sacks	Yield	Weight
			Class G Cement	104	3.3	11.0
			50/50 Poz	886	1.56	14.3

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	11	8.625	0	2000		
Pipe	Grade	Length	Weight			
	Grade J-55 ST&C	2000	24.0			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	2000			
		Cement Description	Class	Sacks	Yield	Weight
			Premium AG300	276	3.5	11.1

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	7750		
Pipe	Grade	Length	Weight			
	Grade N-80 LT&C	7750	15.1			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	7750			
		Cement Description	Class	Sacks	Yield	Weight
			Class G Cement	104	3.3	11.0
			50/50 Poz	886	1.56	14.3

Enduring Resources, LLC

Archy Bench 11-22-11-2
NWNW Sec 2 T11S-R22E
Uintah County, Utah

SITLA Lease: ML-47075

DRILLING PLAN

1. Estimated Tops of Geological Markers:

Formation	Depth (K.B.)
Uinta	Surface
Green River	253'
Wasatch	3296'
Mesaverde	5682'

2. Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals:

Substance	Formation	Depth (K.B.) TVD
	Ground Elevation: 5081'	
	KB-Uinta Elevation: 5096' est.	
Oil / Gas	Green River	253'
Oil /Gas	Wasatch	3296'
Oil /Gas	Mesaverde	5682'
	TD	7750'

An 11" hole surface hole will be drilled with air, air/mist, foam or mud depending on hole conditions to approximately 2016 feet. The depth will be determined by the depth that the Birds Nest zone is encountered. The hole will be drilled 400 feet beyond the top of the Birds Nest zone and surface casing will be set and cemented to surface. Surface casing will be pre-set before drilling rig is moved on location. ProPetro Services Incorporated, or if not available, another Surface Hole Driller (collectively "Surface Hole Driller") will drill the surface hole. A 300 or 400 bbl tank of fresh water will be on location prior to commencement of operations to use as a kill fluid. The anchored blooie line shall be at least 6" in diameter and extend straight from the wellhead to the reserve/blooie pit. Surface Hole Driller's equipment includes a 1250 CFM compressor on the drilling rig along with a 1070 to 1170 CFM stand alone compressor. Surface Hole Driller's equipment shall be setup on the front side of the location with the rig between the driller and the reserve/blooie pit. The stand alone compressor will be adjacent to the rig on the same side as the driller. Surface Hole Driller's equipment includes spark arrestors on engines, a diverter head, a mister close to the end of the blooie line for dust suppression, a continuously lit pilot light, a fluid pump to

circulate kill fluids as necessary, a diverter on the end of the blooie line, a float valve in the drill string and kill switches.

3. Pressure Control Equipment: (3000 psi schematic attached)

- A. Type: Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer on 3,000 psi casinghead, with 3,000 psi choke manifold equipped per the attached diagram. BOPE as specified in *Onshore Oil & Gas Order Number 2*. A PVT, stroke counter and flow sensor will be installed to check for flow and monitor pit volume.
- B. Pressure Rating: 3,000 psi BOPE
- C. Kelly will be equipped with upper and lower Kelly valves.
- D. Testing Procedure: Annular Preventer

At a minimum, the annular preventer will be pressure tested to 50% of the stack rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the annular preventer is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the annular preventer will be functionally operated at least weekly.

Blow-Out Preventer

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the BOP is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

E. Miscellaneous Information:

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*.

4. **Proposed Casing & Cementing Program:**

A. **Casing Program: All New**

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set (MD)
20"	14" O.D.				40' (GL)
11"	8-5/8"	24#	J-55	ST&C	0 – 2016' (KB) est.
7-7/8"	4-1/2"	11.6#	N-80	LT&C	0 – 7750' (KB)

The surface casing will have guide shoe, 1 joint, insert float collar. Centralize the shoe joint with bowspring centralizers in the middle and top of the joint and the next 16 joints with bowspring centralizers on every other collar (8 centralizers total). Thread lock guide shoe. Surface casing will be pre-set before the drilling rig is moved on location.

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

B. **Casing Design Parameters:**

Depth (MD)	Casing	Collapse(psi)/SF	Burst (psi)/SF	Tension(mlbs)/SF
40' (GL)	14" OD			
2016' (KB)	8-5/8", 24#/ft, J55, STC	1370/1.52(a)	2950/3.28(b)	244/5.81(c)
7750' (KB)	4-1/2", 11.6#/ft, N-80, LTC	6350/1.57 (d)	7780/2.09 (e)	223/2.87 (f)

- (a.) based on full evacuation of pipe with 8.6 ppg fluid on annulus
- (b.) based on 8.6 ppg gradient with no fluid on annulus
- (c.) based on casing string weight in 8.6 ppg mud
- (d.) based on full evacuation of pipe with 10.0 ppg fluid on annulus
- (e.) based on 9.2 ppg gradient, gas to surface, with no fluid on annulus, no gas gradient
- (f.) based on casing string weight in 9.2 ppg mud

PROPOSED CEMENTING PROGRAM

Surface Casing (if well will circulate)-Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft ³ /sx)
8-5/8"	Lead	1516	Premium cement + 16% gel + 0.25 pps celloflake	138	25%	11.1	3.50
8-5/8"	Tail	500	Premium cement + 2% CaCl ₂ + 0.25 pps celloflake	138	25%	15.8	1.15

A cement top job is required if cement fallback is greater than 10' below ground level. Top job (weight 15.8 ppg, yield 1.15 ft³/sx) cement will be premium cement w/ 3% CaCl₂ + 0.25 pps celloflake. Volume as required

Surface Casing (if well will not circulate) - Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft ³ /sx)
8-5/8"	Lead	500	Premium cement + 2% CaCl ₂ + 0.25 pps celloflake	138	25	15.8	1.15
8-5/8"	Top job	As req.	Premium cement + 3% CaCl ₂ + 0.25 pps celloflake	As Req.		15.8	1.15

Production Casing and Liner - Cemented TD to 300' above base of surface casing

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft ³ /sx)
4-1/2"	Lead	1180	Class "G" + 5% NaCl + 12% Gel + 0.25 pps celloflake + 0.2% antifoam + 0.25% fluid loss + 1% extender	104	25	11.0	3.3
4-1/2"	Tail	4854	50/50 POZ Class G + 2% gel + 1% CaCl ₂ + 0.2% dispersant + 0.2% fluid loss + 0.1% antifoam	886	25	14.3	1.56

Cement volumes for the 4-1/2" Production Casing will be calculated to provide a top of cement to 300' above base of surface casing. Cement volumes are approximate and were calculated under the assumption that a gauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole

size and will be determined by running a caliper log on the drilled hole. Actual cement types may vary due to hole conditions and cement contractor used.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

5. Drilling Fluids (mud) Program:

Interval (MD)	Mud Weight	Fluid Loss	Viscosity	Mud Type
0' – 2016' (KB)		No cntrl		Air/mist
2000'-3000' (KB)	8.4-8.6	No cntrl	28-36	Water
3000'-7750' (KB)	8.8-9.8	8 - 10 ml	32-42	Water/Gel

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations.

6. Evaluation Program:

Tests: No tests are currently planned.

Coring: No cores are currently planned.

Samples: No sampling is currently planned.

Logging

- Dual Induction – SFL /Gamma Ray/Caliper/SP/TDLT/CNL/ML
TD to Base Surface Casing
- Cement Bond Log / Gamma Ray:
TD to Base of Surface Casing or Top of Cement if below Base of Surface Casing

Stimulation: A stimulation or frac treatment will be designed for completion of this well based on openhole log analysis. The drill site, as approved, will be sufficient size to accommodate all completion activities.

7. Abnormal Conditions:

No abnormal temperatures or pressures are anticipated. No H₂S has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 4,030 psi (calculated at 0.52 psi/foot of hole) and maximum anticipated surface pressure equals approximately 2,325 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

8. **Anticipated Starting Dates:**

- Anticipated Commencement Date- Within one year of APD issue.
- Drilling Days- Approximately 10 days
- Completion Days - Approximately 10 days
- Anticipate location construction within 30 days of permit issue.

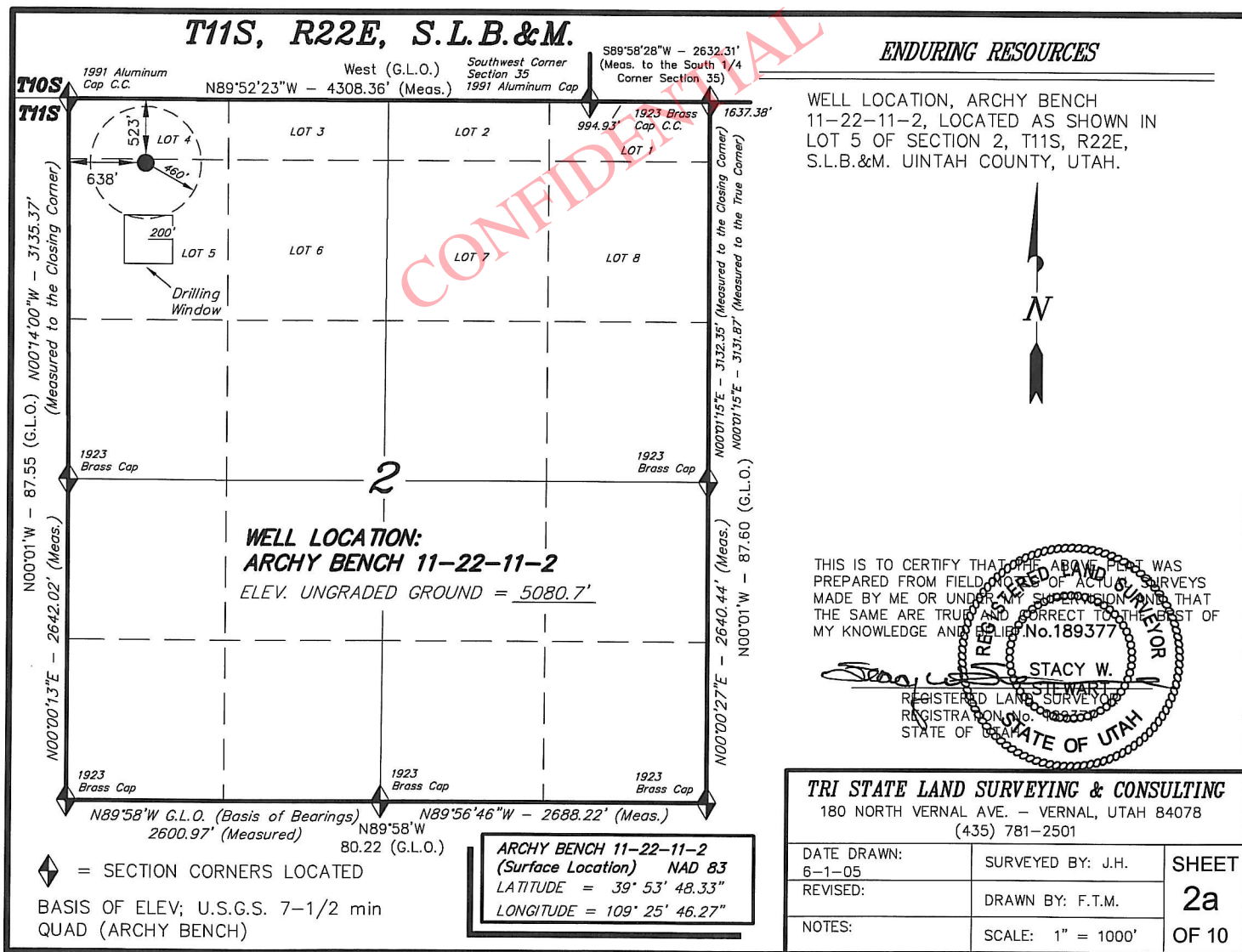
9. **Variances:**

None anticipated

10. **Other:**

A Cultural Resource Inventory and Paleontology reconnaissance have been conducted for the well location, access route and pipeline. The reports have been submitted to the BLM.

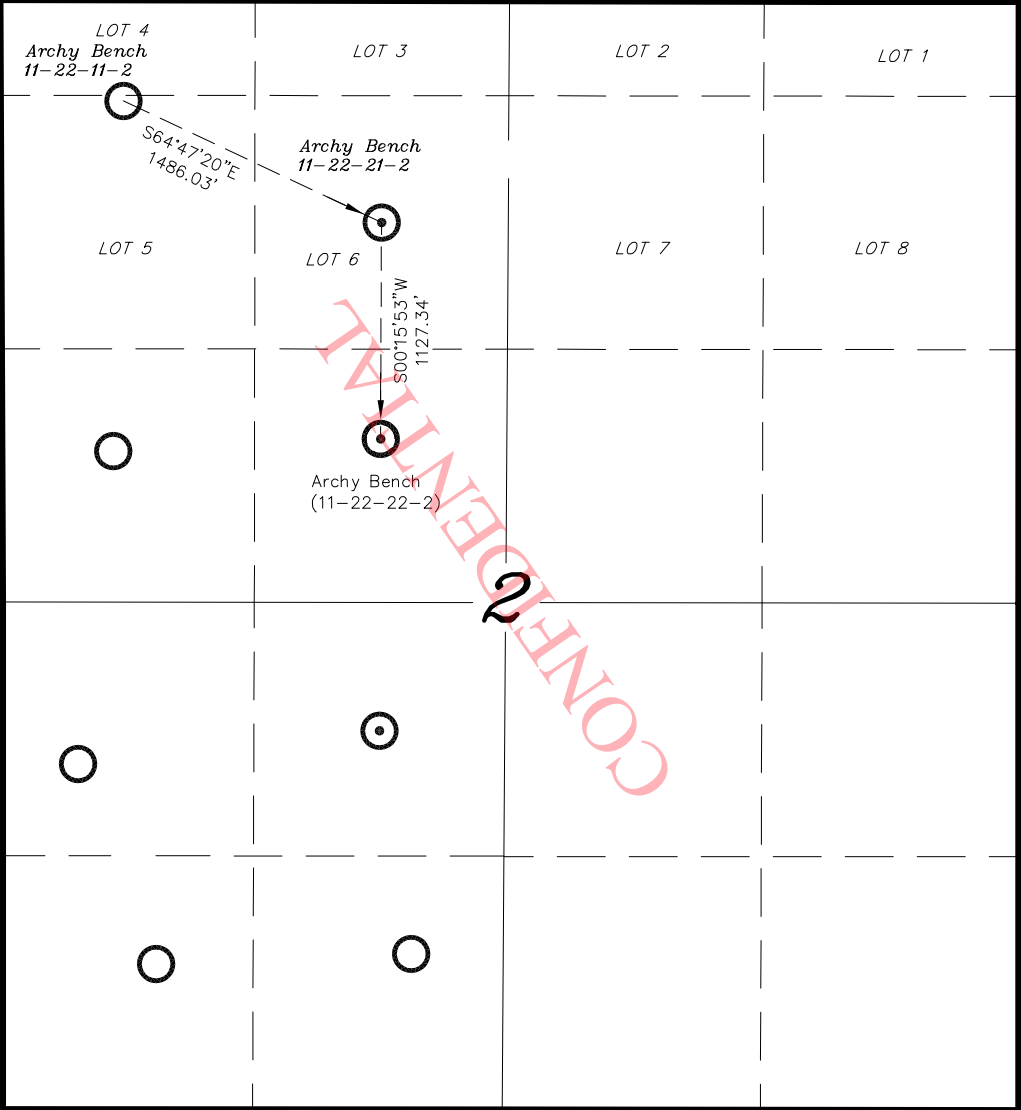
A measurement while drilling (MWD) system will be used to track and control the directional path of the wellbore.



T11S, R22E, S.L.B.&M.

ENDURING RESOURCES

T10S
T11S



SECTION DRILLING MAP
ARCHY BENCH 11-22-11-2
ARCHY BENCH 11-22-21-2



LEGEND

- = Vertical Well
- ⊙ = Directional Well Bottom Hole

TRI STATE LAND SURVEYING & CONSULTING
180 NORTH VERNAL AVE. — VERNAL, UTAH 84078
(435) 781-2501

DATE DRAWN: 6-1-05	SURVEYED BY: J.H.	SHEET 1 OF 10
REVISED: 6-9-05	DRAWN BY: F.T.M.	
NOTES:	SCALE: 1" = 1000'	

'APIWellNo:43047501840000'

APIWellNo:43047501840000,

ENDURING RESOURCES

WELL PAD INTERFERENCE PLAT

ARCHY BENCH 11-22-11-2

ARCHY BENCH 11-22-21-2

Section 2, T11S, R22E, S.L.B.&M.



TOP HOLE FOOTAGES

11-22-11-2
523' FNL & 638' FWL
11-22-21-2
543' FNL & 641' FWL

LOT 4

BOTTOM HOLE FOOTAGES

11-22-11-2
VERTICAL
11-22-21-2
1153' FNL & 1980' FWL

CONFIDENTIAL

1/16 Section Line

11-22-11-2

11-22-21-2

20'

S10°50'41"E

S65°25'08"E = 1474.32'
(To Bottom Hole)

LOT 5

Note:

Bearings are derived
using true North.

RELATIVE COORDINATES From top hole to bottom hole

WELL	NORTH	EAST
11-2	N/A	N/A
21-2	-613'	1,341'

LATITUDE & LONGITUDE Surface position of Wells (NAD 83)

WELL	LATITUDE	LONGITUDE
11-2	39° 53' 48.33"	109° 25' 46.27"
21-2	39° 53' 48.13"	109° 25' 46.23"

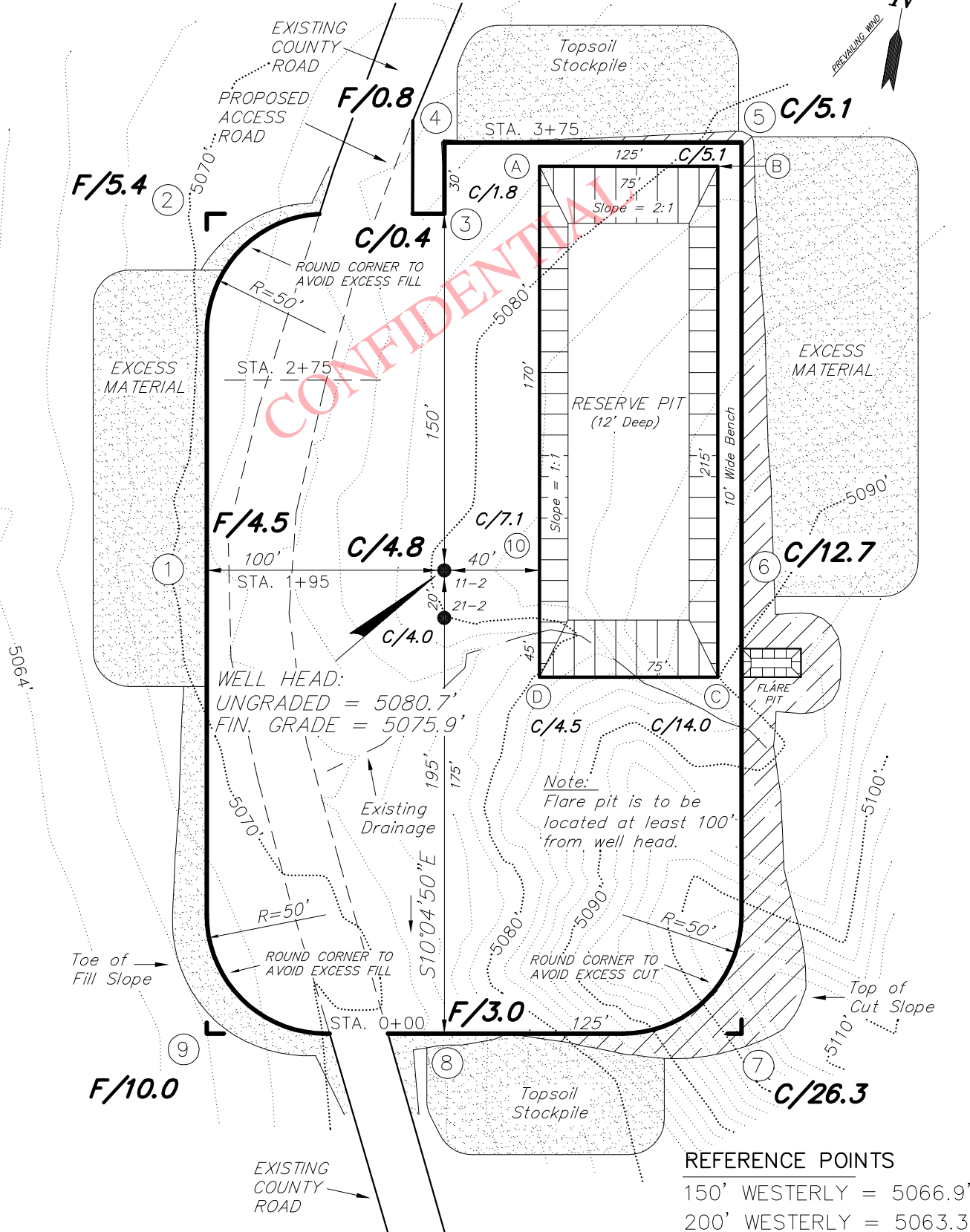
SURVEYED BY: J.H. DATE DRAWN: 6-1-05
DRAWN BY: F.T.M. SCALE: 1" = 60'
NOTES:

Tri State (435) 781-2501
Land Surveying, Inc.
180 NORTH VERNAL AVE. VERNAL, UTAH 84078

SHEET
3
OF 10

ENDURING RESOURCES

ARCHY BENCH 11-22-11-2
ARCHY BENCH 11-22-21-2
Section 2, T11S, R22E, S.L.B.&M.



SURVEYED BY:	J.H.	DATE DRAWN:	6-1-05
DRAWN BY:	F.T.M.	SCALE:	1" = 60'
NOTES:			

Tri State
Land Surveying, Inc.
180 NORTH VERNAL AVE. VERNAL, UTAH 84078
(435) 781-2501

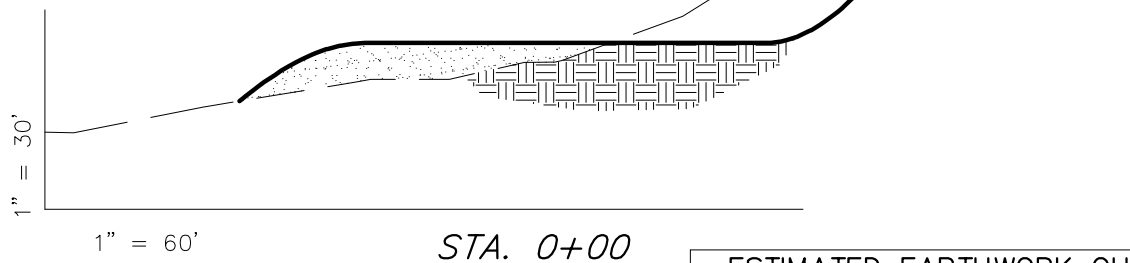
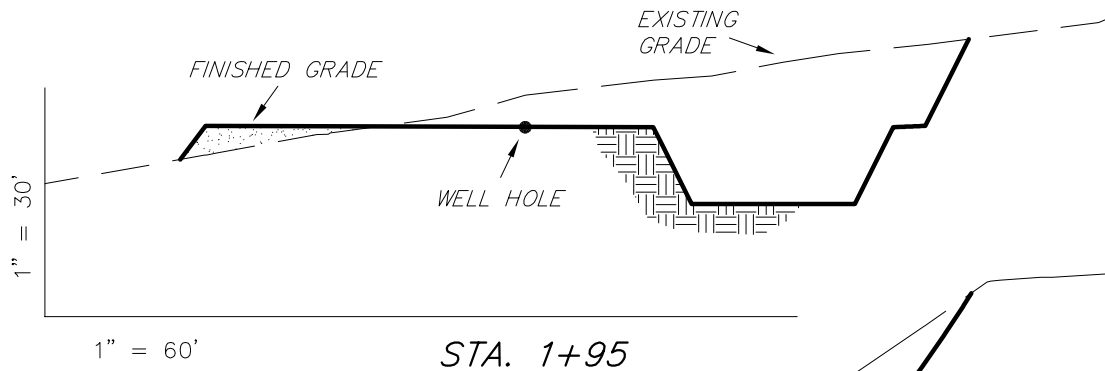
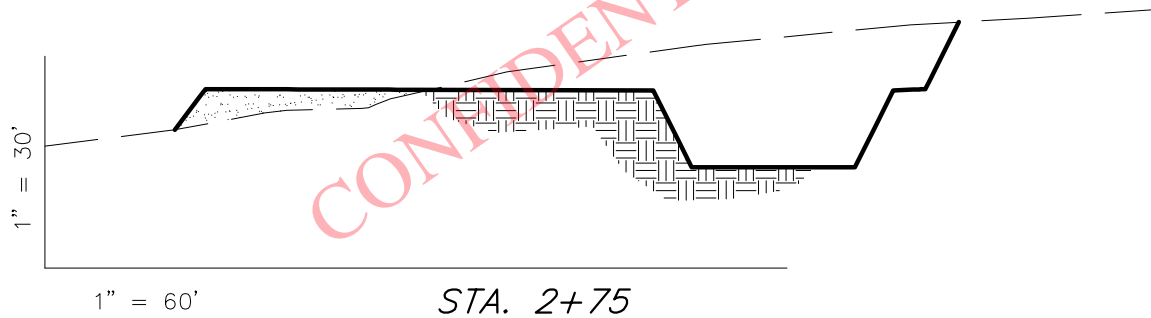
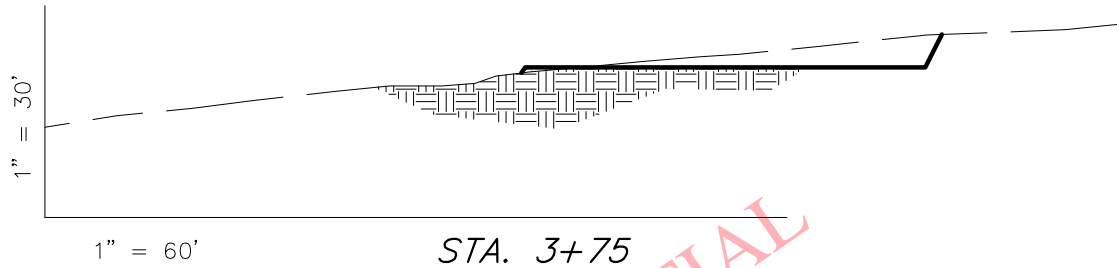
SHEET
4
OF 10

ENDURING RESOURCES

CROSS SECTIONS

ARCHY BENCH 11-22-11-2

ARCHY BENCH 11-22-21-2



NOTE:
UNLESS OTHERWISE NOTED
CUT SLOPES ARE AT 1:1
FILL SLOPES ARE AT 1.5:1

ESTIMATED EARTHWORK QUANTITIES (No Shrink or swell adjustments have been used) (Expressed in Cubic Yards)

ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	16,390	4,910	Topsoil is not included in Pad Cut	11,480
PIT	5,390	0		5,390
TOTALS	21,780	4,910	1,710	16,870

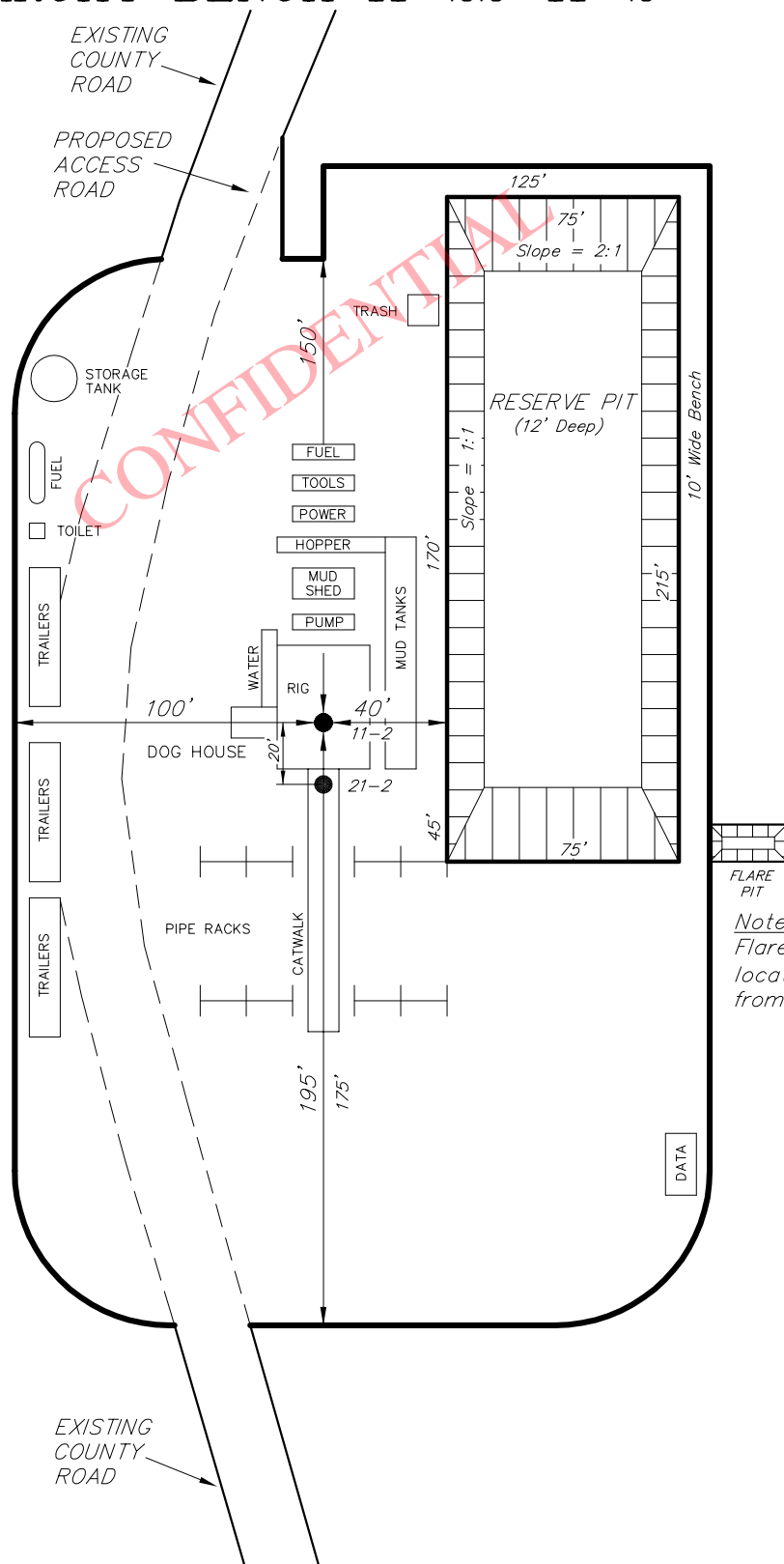
SURVEYED BY: J.H. DATE DRAWN: 6-1-05
DRAWN BY: F.T.M. SCALE: 1" = 60'
NOTES:

Tri State
Land Surveying, Inc.
180 NORTH VERNAL AVE. VERNAL, UTAH 84078
(435) 781-2501

SHEET
5
OF 10

ENDURING RESOURCES

TYPICAL RIG LAYOUT ARCHY BENCH 11-22-11-2 ARCHY BENCH 11-22-11-2



FLARE
PIT

Note:
Flare pit is to be
located at least 100'
from well head.

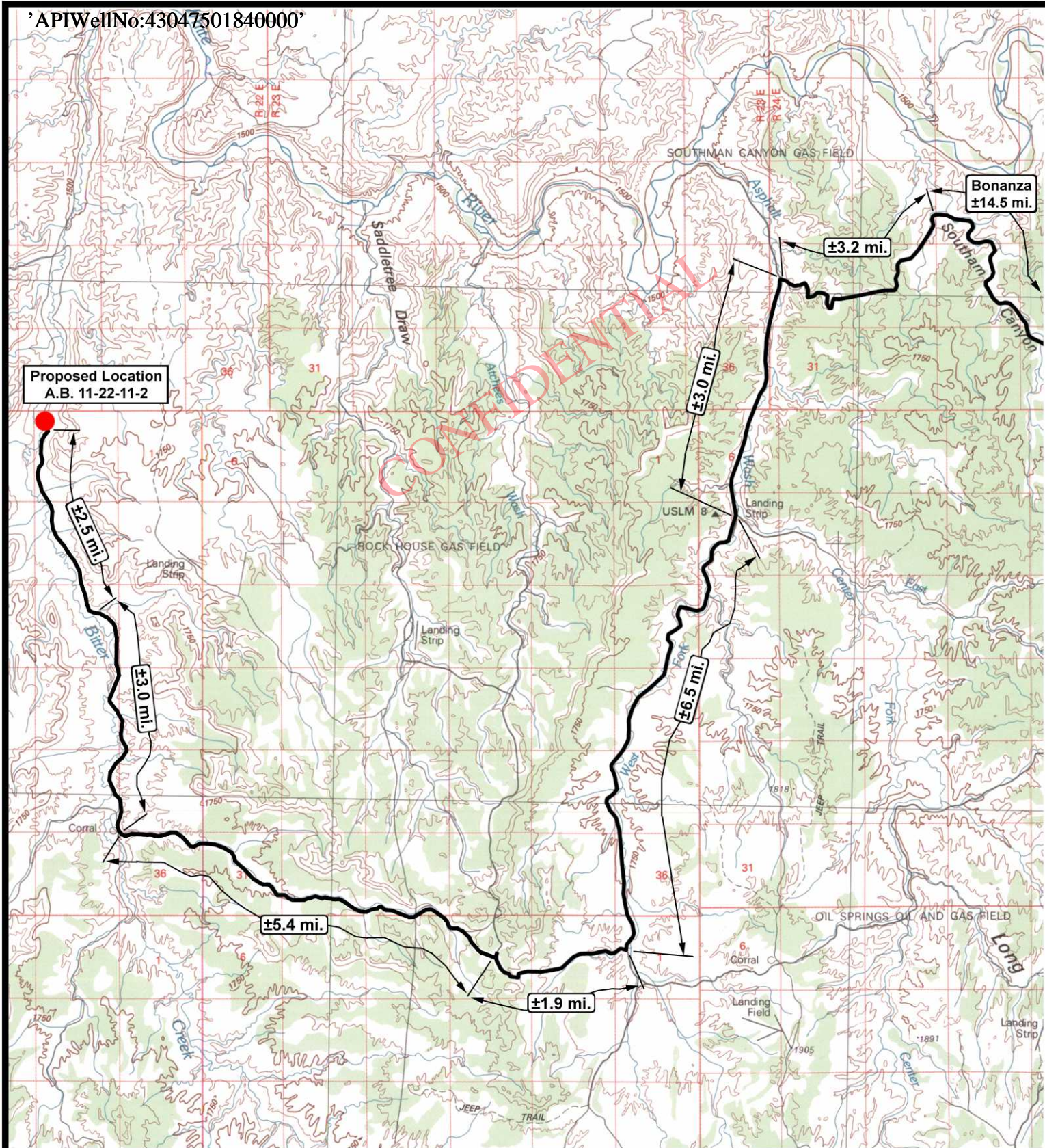
SURVEYED BY: J.H.	DATE DRAWN: 6-1-05
DRAWN BY: F.T.M.	SCALE: 1" = 60'
NOTES:	

Tri State
Land Surveying, Inc.
180 NORTH VERNAL AVE. VERNAL, UTAH 84078
(435) 781-2501

SHEET
6
OF 10

Directions to the Archy Bench 11-22-11-2 Well Pad

Beginning at the city of Bonanza, Utah. Leave the city of Bonanza heading south on state highway 45 for a distance of approximately 5.7 miles where there is a turn-off to the right. Turn right, leaving state highway 45, and proceed southwest for a distance of approximately 5.1 miles ($3.2 + 1.9$ as shown on Topo "A"). The road then turns to the west; proceed northwesterly along said road for a distance of approximately 3.7 miles. Said road then turns to the southwest; proceed southwesterly then westerly for a distance of approximately 3.2 miles where the road forks. Turn left and bear southerly along the Asphalt Wash road for a distance of 3.0 miles where the road forks near a landing strip. Stay right, and continue heading south along the West Fork road for a distance of approximately 6.5 miles where there is a turn-off to the right. Turn right and bear westerly for a distance of approximately 1.9 miles where there is a turn-off to the left. Turn left and bear westerly for approximately 5.4 miles where there is an intersection. Turn right and bear northerly for a distance of 5.5 miles ($3.0 + 2.5$ as shown on Topo "A") to the proposed Archy Bench 11-22-11-2 well pad, which sits on existing access.



ENDURING RESOURCES

Archy Bench 11-22-11-2
Sec. 2, T11S, R22E, S.L.B.&M.



Tri-State
Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 100,000'
DRAWN BY: bgm
DATE: 06-02-2005

Legend

Existing Road

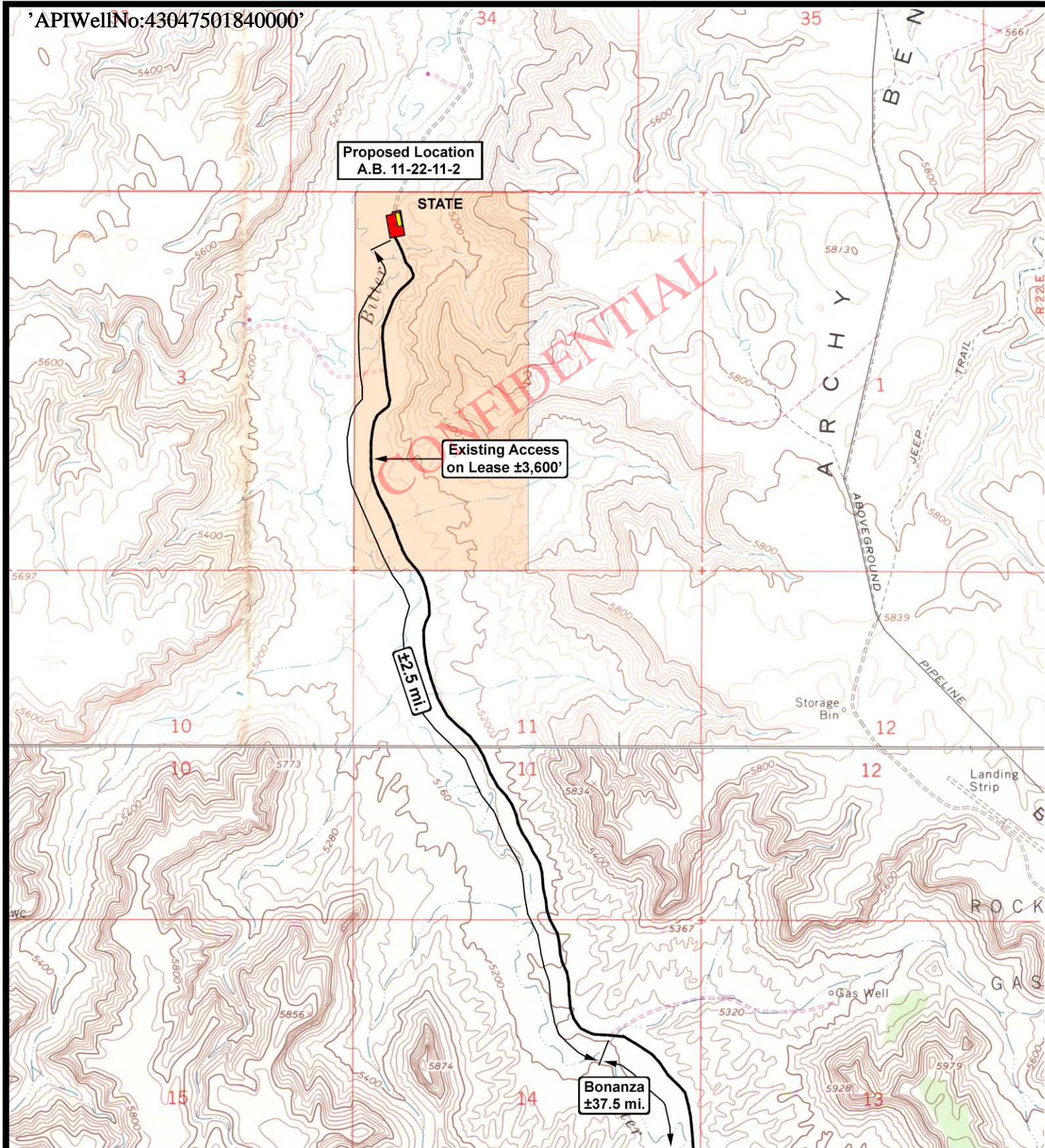
TOPOGRAPHIC MAP

"A"

SHEET

7

OF 10



ENDURING RESOURCES

Archy Bench 11-22-11-2
Sec. 2, T11S, R22E, S.L.B.&M.



Tri-State
Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'
DRAWN BY: bgm
DATE: 06-02-2005

Legend

Existing Road

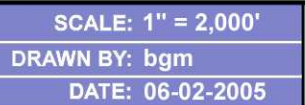
TOPOGRAPHIC MAP

"B"

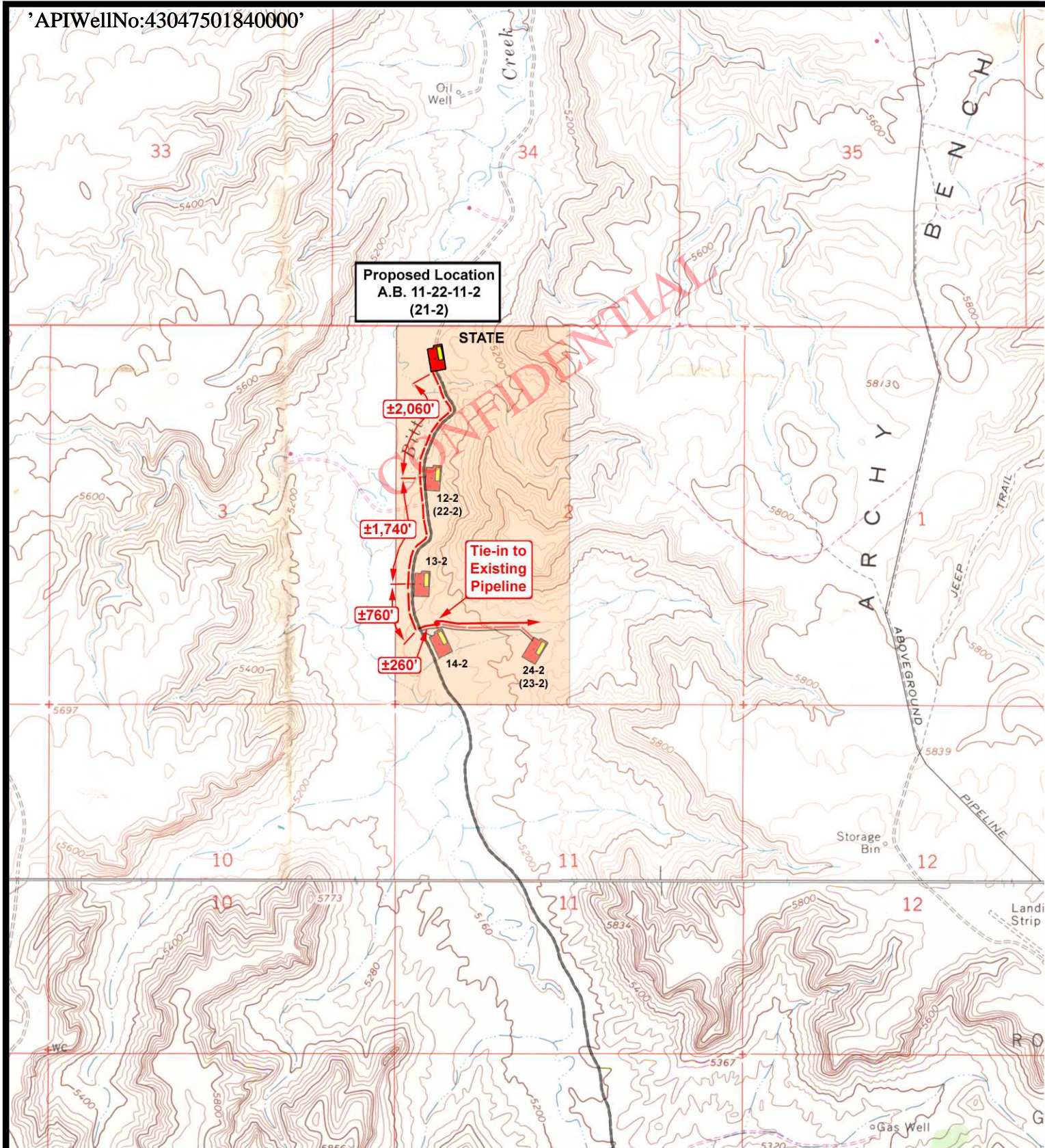
SHEET

8

OF 10



"C"



ENDURING RESOURCES

Archy Bench 11-22-11-2
Sec. 2, T11S, R22E, S.L.B.&M.



Tri-State
Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'
DRAWN BY: bgm
DATE: 06-02-2005

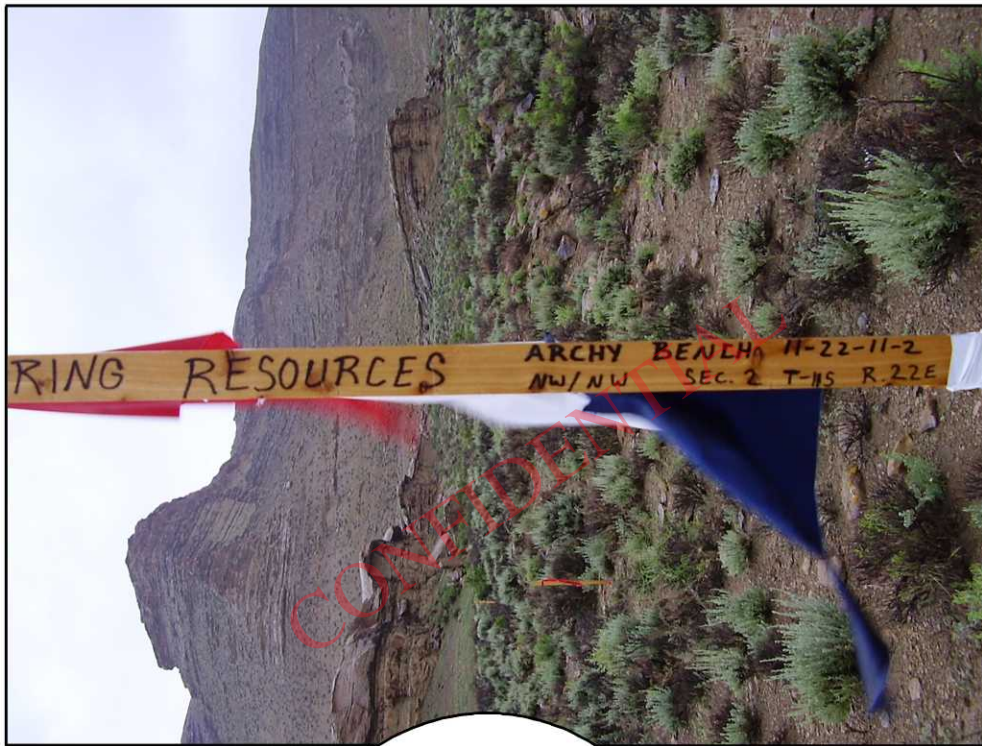
Legend

- Roads
- Existing Gas Line
- Proposed Gas Line

TOPOGRAPHIC MAP

"D"

SHEET
10
OF 10



CENTER STAKE


ENDURING RESOURCES
A.B. 11-22-11-2

Date Photographed: 05/20/2005
Date Drawn: 05/23/2005
Drawn By: bgm


Tri-State
Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078



NORTH


ENDURING RESOURCES

A.B. 11-22-11-2

Date Photographed: 05/20/2005

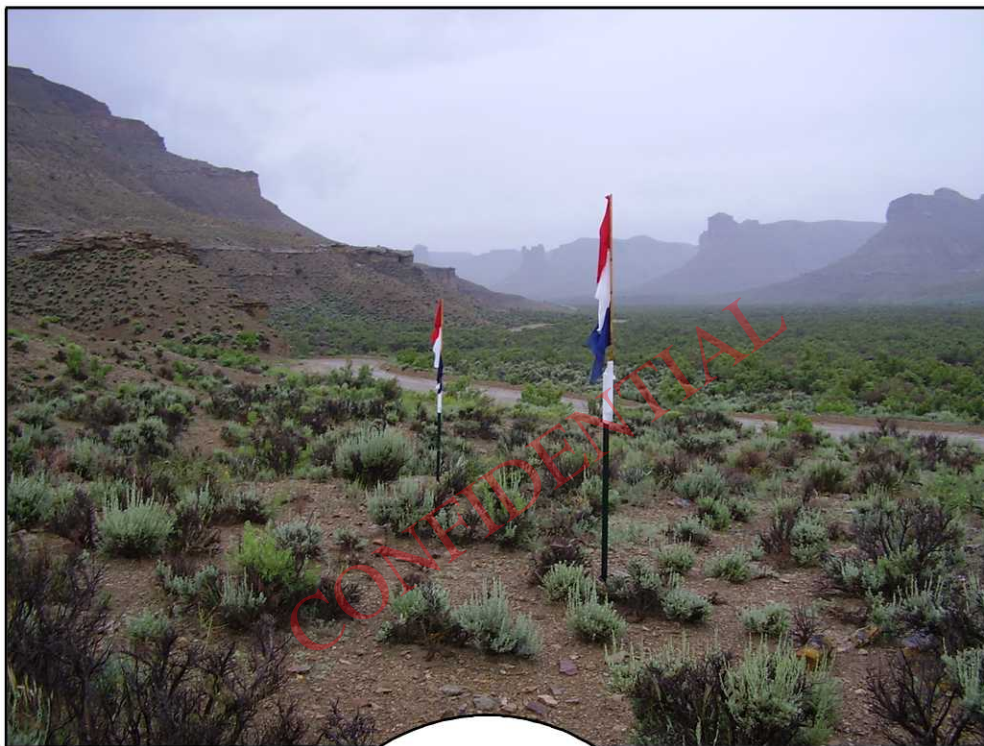
Date Drawn: 05/23/2005

Drawn By: bgm


Tri-State
Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

EAST





SOUTH

Date Photographed: 05/20/2005

Date Drawn: 05/23/2005

Drawn By: bgm

WEST


ENDURING RESOURCES

A.B. 11-22-11-2


Tri-State
Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078





United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Vernal Field Office

170 South 500 East

Vernal, UT 84078

(435) 781-4400 Fax: (435) 781-4410



IN REPLY REFER TO:

2880

UTU-84798

(UT-084)

SEP 18 2006

PAID BY ALEX
CL 9-19-06

CERTIFIED MAIL 70060100 0004 0586 1680

RETURN RECEIPT REQUESTED

DECISION

Enduring Resources, LLC

475 17th Street, Suite 1500

Denver, Colorado 802020

Attn: Phyllis Sobotik

:
:
:
:

Right-of-Way

Grant UTU-84798

Right-of-Way Grant UTU-84798 Issued

Rental Determined

Monitoring Fee Determined

Enclosed is a copy of your right-of-way (ROW) grant, serial number UTU-84798, which allows the use of public land for an access road and well pad. It was approved by the BLM on September 19, 2006.

The advance rental for the ROW is determined to be **\$246.28** for the period from (October, 2006) to (December, 2036). BLM has received your advance rental for this period.

The monitoring fee for this ROW is determined to be a Category 4, which is **\$953**. BLM has received your monitoring fee.

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and the enclosed Form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (at the above address) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition (request) pursuant to regulation 43 CFR 2801.10 or 43 CFR 2881.10 for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land

Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied,
- (2) The likelihood of the appellant's success on the merits,
- (3) The likelihood of immediate and irreparable harm if the stay is not granted, and
- (4) Whether the public interest favors granting the stay.

If you have any questions, please contact Paul Rodriquez, Realty Specialist, at (435) 781-4409.



Robert M. Specht
Branch Chief,
Land & Surface Compliance

Enclosure (s):
Signed Right-of-Way Grant, UTU-84798
Form 1842-1

FORM 2800-14
(August 1985)

Issuing Office
Vernal Field Office

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
RIGHT-OF-WAY GRANT

SERIAL NUMBER UTU-84798

1. A right-of-way is hereby granted pursuant to Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761).

2. Nature of Interest:

a. By this instrument, the holder:

Enduring Resources, LLC.
475 17th Street, Suite 1500
Denver, Colorado 80202

Receives a right to construct, operate, maintain, reclaim and terminate an access road and oil and gas well pad, serial number UTU-84798, on public lands described as follows:

Salt Lake Meridian, Utah
Township 11 South, Range 22 East.
Sec. 2, N $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$.

- b. The right-of-way area granted herein is 30 feet long and 30 feet wide with a running surface of 18 feet. The road would be crowned 2% to 3%, ditched and a grade of the road would be 5% or less. Graveling or capping the roadbed will be performed as necessary to provide a well constructed, safe road, and contains .002
- c. The Well pad would be approximately 345 long and 130 feet wide. The pad would require four temporary use areas; site one and two would be for topsoil stockpile and site three and four would be for excess material. Site one would be approximately between pole 7 and 8, 55 feet wide by 100 feet long. Site two would be approximately between poles 4 and 5 and approximately 50 feet wide by 120 feet long. Site three would be approximately between pole 2 and 9, and approximately 50 feet wide by 170 feet long. Site four would be approximately between poles 5 and 6 and approximately 50 feet wide by 175 feet long. Total disturbance for the well pad would be approximately 1.03 acres, for temporary use, site one .13 acres, site two .11 acres, site three .19 acres, site four .20 acres for a total disturbance of approximately 1.66 acres, more or less.
- d. This instrument shall terminate upon the expiration of or December 31, 2036,

unless, prior thereto, it is relinquished, abandoned, terminated, or modified pursuant to the terms and conditions of this instrument or of any applicable Federal law or regulation.

- e. This instrument may be renewed. If renewed, the right-of-way shall be subject to the regulations existing at the time of renewal and any other terms and conditions that the authorized officer deems necessary to protect the public interest.
- f. Notwithstanding the expiration of this instrument or any renewal thereof, early relinquishment, abandonment, or termination, the provisions of this instrument, to the extent applicable, shall continue in effect and shall be binding on the holder, its successors, or assigns, until they have fully satisfied the obligations and/or liabilities accruing herein before or on account of the expiration, or prior termination, of the grant.

3. Rental:

For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management fair market value rental as determined by the authorized officer unless specifically exempted from such payment by regulation. Provided, however, that the rental may be adjusted by the authorized officer, whenever necessary, to reflect changes in the fair market rental value as determined by the application of sound business management principles, and so far as practicable and feasible, in accordance with comparable commercial practices. Rental payments, if applicable, should be submitted to the following address:

BLM Vernal Field Office
170 South 500 East
Vernal, Utah 84078

4. Terms and Conditions:

- a. This grant is issued subject to the holder's compliance with all applicable regulations contained in Title 43 Code of Federal Regulations part 2880.
- b. Upon grant termination by the authorized officer, all improvements shall be removed from the public lands within 90 days, or otherwise disposed of as provided in paragraph (4)(d) or as directed by the authorized officer.
- c. Each grant issued for a term of 30 years or more shall, at a minimum, be reviewed by the authorized officer at the end of the 20th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that a right-of-way granted herein may be reviewed at any time deemed necessary by the authorized officer.
- d. The maps set forth in Exhibit A, dated June 6, 2005, and attached hereto, are incorporated into and made a part of this grant instrument as fully and effectively as if it were set forth herein in its entirety.

- e. Failure of the holder to comply with applicable law or any provision of this right-of-way grant shall constitute grounds for suspension or termination thereof.
- f. The holder shall perform all operations in a good and workmanlike manner so as to ensure protection of the environment and the health and safety of the public.
- g. Holder shall provide a **bond**, acceptable to the authorized officer, in the amount, to be determined by the BLM within 90 days, that must be maintained in effect until restoration of the right-of-way has been accepted by the authorized officer. The bond shall be furnished by the holder within 90 days after commencement of activities under the grant.
- h. A phase **release of the bond** may be acceptable upon receipt of a request from the bonded principal. The phase bond may be reduced in phases upon completion and inspection of certain stages of abandonment. Two stages appear to be sufficient since re-inspection would be required at each phase, i.e. (1) after the well has been properly plugged, abandoned, and the site has been stabilized and seeded, the bond may be release in part, e.g., by 80 percent; and (2) when the revegetation is completed and final abandonment has been approved, the period of the bond may be fully terminated.
- i. Once the location is plugged and abandoned, it shall be recontoured to natural contours, topsoil respread where appropriate, and the entire location seeded with the recommended seed mix. Seeding should take place by broadcasting the seed and walking it into the soil with a dozer immediately after the dirt work is completed.
- j. If paleontologic materials are uncovered during construction, the operator shall immediately stop work that might further disturb such materials and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation will be necessary for the discovered paleontologic material.
- k. Interim Reclamation Seed Mix for location:

Hycrest Crested Wheatgrass	<i>Agropyron cristatum</i>	4lbs. /acre
Needle and Threadgrass	<i>Stipa comata</i>	4lbs. /acre
Indian Ricegrass	<i>Pleuraphis hymenoides</i>	4lbs. /acre

- Certified weed free seed and straw shall be used for final and interim reclamation. The operator shall submit a receipt with certification for the seed and any straw used on location.
- The above listed seed mix shall be used to seed all unused portions of the pad including the topsoil and stock piles, and the reserve pits. Re-seeding may be required if the first seeding is not successful.
- The seed shall be drilled or disked into the ground or hand broadcast onto the ground. Planting

depth shall not exceed one-half inch using a seed drill. If the seed is hand broadcast then the seed mixture shall be doubled and the area raked or chained to cover the seed.

- The topsoil from the reserve pit should be stripped and piled separately near the reserve pit. When the reserve pit is closed it should be re-contoured, then the area should be seeded in the same manner as the topsoil.
 - There shall be no primary or secondary noxious weeds in the seed mixture.
 - All pounds are in pure live seed.
 - Reseeding may be required if first seeding is not successful.
- l. The topsoil from the reserve pit shall be stripped and piled separately near the reserve pit. When the reserve pit is closed, it shall be re-contoured and the topsoil re-spread, and the area shall be seeded in the same manner as the location topsoil.
 - m. The lessee/operator is given notice that lands in the lease have been identified as containing a crucial elk winter habitat. It is requested that the lessee/operator not initiate surface disturbing activities or drilling from December 1st through April 30th. A survey may be conducted by a qualified biologist or a BLM representative during this timing period to determine if elk are in the area.
 - n. The lessee/operator is given notice that lands in the lease have been identified as containing a sage grouse strutting ground. It is requested that the lessee/operator not initiate surface disturbing activities or drilling from March 1st through June 30th. A survey may be conducted by a qualified biologist or a BLM representative during this timing period to determine if sage grouse are in the area. Also low profile tanks will be installed to help protect the sage grouse.
 - o. The authorized officer may prohibit surface disturbing activities during severe winter conditions to minimize watershed damage. This limitation does not apply to operation and maintenance of producing wells.
 - p. The authorized officer may prohibit surface disturbing activities during wet or muddy conditions to minimize watershed damage. This limitation does not apply to operation and maintenance of producing wells.
 - q. The holder shall reclaim the right-of-way route by re-contouring and re-seeding disturbed areas as prescribed by the authorized officer. Ninety percent pure live seed will be used. The seed shall be applied by a drill equipped with a depth regulator. Planting depth shall not exceed one-half inch. Where drilling is not possible, the seed shall be broadcast at twice the recommended rate of application and the area shall be raked or chained to cover the seed.

r. **CONDITIONS OF APPROVAL FOR THE SURFACE USE PROGRAM**

- If additional erosion occurs during the life of this project, more culverts, low water crossings, berms, wing ditches or etc. may be needed to control the erosion. The operator shall submit a proposal to control erosion to the BLM.
- The reserve pit shall be double lined with felt and a 12 ml or greater liner or single lined with 16ml or greater.
- No vehicle travel, construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support vehicles and/or construction equipment. If such equipment creates ruts in excess of four inches deep, the soil shall be deemed too wet to adequately support construction equipment.
- The liner is to be cut at the level of the cuttings or treated to prevent the reemergence of the pit liner and pit material to the surface or its interference with long-term successful re-vegetation. Any excess liner material removed from the pit is to be disposed of at an authorized disposal site.
- When the reserve pit contains fluids or toxic substances, the operator must ensure that animals do not ingest or become entrapped in pit fluids.
- Drill cuttings and mud shall remain in the reserve pit until **DRY**. The reserve pit must be free of oil and other liquid and solid wastes, allowed to dry, be pumped dry, or solidified in-situ prior to filling. The reserve pit shall not be "squeezed," (filled with soil while still containing fluids) or "cut" (puncturing the pit liner while still containing fluids to allow pit fluids to drain from the pit).
- Prevent fill and stock piles from entering drainages.
- Notify the Authorized Officer 48 hours prior to surface disturbing activities.
- All well facilities not regulated by OSHA shall be painted Olive Black.
- Following well plugging and abandonment, the location, access roads, pipelines, and other facilities shall be reclaimed. All disturbed surfaces shall be reshaped to approximate the original contour; the top soil respread over the surface; and, the surface revegetated. The surface of approved staging areas where construction activities did not occur may require disking or ripping and reseeding.
- Where possible, strip six inches of topsoil from the location as shown on the cut sheet. After the well is completed, the topsoil shall be spread and re-contoured on the location and immediately seeded with the seed mix below.
- Once the location is plugged and abandoned contact the Authorized Officer for final

reclamation plans.

- Water Use for drilling/construction purposes:
Implement Reasonable and Prudent Measure (1):

1. If the pump head is located in the river channel, do not situate the pump in a low-flow or no-flow area as these habitats tend to concentrate fishes.
2. Screen all pump intakes with 1/4" mesh material.
3. Report any fish impinged on the intake screen to the Service (801.975.3330) or the Utah Division of Wildlife Resources:

Northeastern Region

152 East 100 North, Vernal UT 84078

Phone: (435) 781-9453

s. **Site Specific Additional Conditions* (other than above)**

None

- t. **CULTURAL AND PALEONTOLOGICAL RESOURCES STIPULATION** Any cultural and/or paleontological resource (historic or prehistoric site or object or fossil) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery shall be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder shall be responsible for the cost of evaluation and a decision as to proper mitigation measures shall be made by the authorized officer after consulting with the holder.

u. **COMPLETION and PRODUCTION**

Blow back fluids from completion operations shall be contained such that hydrocarbons are not introduced into the reserve pit.

Reserve pits shall maintain a minimum of 2 feet of freeboard.

During all road building, pad construction, drilling, well completion, producing and abandonment activities, all gasoline, diesel powered equipment used must be equipped with approved spark arresters or mufflers.

Production facilities (including dikes) shall be placed on cut and a minimum of 20' from the toe of the backcut.

Pesticides may not be used to control undesirable woody and herbaceous vegetation, aquatic plants, insects, rodents, trash fish, etc., **without the prior written approval** of the BLM. A request for approval of planned uses of pesticides shall be submitted 4 months prior to the proposed starting date.

No production pits shall be allowed on the location.

Load outs shall be inside the dike. A drip barrel shall be installed under the end of the loadout line.

All production facilities, i.e. pump, pump house, storage tanks, oil-water separator, galvanized dikes, propane tanks, etc. shall be painted with a lusterless color (Carlsbad Canyon). All facilities shall be painted within six (6) months of installation.

The well location shall be maintained in a clean environmentally friendly manner, using good house keeping practices.

Equipment not being used for production shall not be stored on the well location.

All oil and chemical barrels shall be labeled and have a spill containment device to protect soils from possible contamination.

v.

ABANDONED WELL

BLM will be notified prior to abandonment, a final reclamation seed mix shall be designated at the time.


The seed shall be drilled or hand broadcast and harrowed into the ground during September of the year following earthwork for initial or final reclamation. Planting depth shall not exceed one-half inch using a seed drill. Weed seed free mulch shall also be applied to the planting area sufficiently to uniformly cover 80% of the seeded area. Hydroseeding and mulching can also be used, but seeding rates will need to be doubled.

The cut and fill slopes shall be recontoured to original contours. The entire disturbed area shall then be back-filled with topsoil, landscaped, seeded and fenced to exclude livestock. The fence shall remain in place. It shall be removed prior to approval of final abandonment.


IN WITNESS WHEREOF, The undersigned agrees to the terms and conditions of this right-of-way grant.




Signature of Holder



Robert M. Specth



Vice President
(Title)



Authorized Officer
(Title)



09/19/06
(Date)



9/19/2006
(Effective Date of Grant)

Form 1842-1
(April 2006)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INFORMATION ON TAKING APPEALS TO THE INTERIOR BOARD OF LAND APPEALS

DO NOT APPEAL UNLESS

1. This decision is adverse to you,
AND
2. You believe it is incorrect

IF YOU APPEAL, THE FOLLOWING PROCEDURES MUST BE FOLLOWED

1. NOTICE OF APPEAL.....	A person served with the decision being appealed must transmit the <i>Notice of Appeal</i> in time for it to be filed in the office where it is required to be filed within 30 days after the date of service. If a decision is published in the FEDERAL REGISTER, a person not served with the decision must transmit a <i>Notice of Appeal</i> in time for it to be filed within 30 days after the date of publication (43 CFR 4.411 and 4.413).
2. WHERE TO FILE NOTICE OF APPEAL.....	Bureau of Land Management, Vernal Field Office, 170 South 500 East, Vernal, Utah 84078
WITH COPY TO SOLICITOR...	Regional Solicitor Intermountain Region, Department of the Interior, Room 6201 Federal Bldg. 125 South State Street, Salt Lake City, m Utah 84143
3. STATEMENT OF REASONS	Within 30 days after filing the <i>Notice of Appeal</i> , file a complete statement of the reasons why you are appealing. This must be filed with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. If you fully stated your reasons for appealing when filing the <i>Notice of Appeal</i> , no additional statement is necessary (43 CFR 4.412 and 4.413).
WITH COPY TO SOLICITOR.....	Regional solicitor Intermountain Region, Department of the Interior, Room 6201 Federal Bldg. 125 South State Street, Salt
4. ADVERSE PARTIES.....	Within 15 days after each document is filed, each adverse party named in the decision and the Regional Solicitor or Field Solicitor having jurisdiction over the State in which the appeal arose must be served with a copy of: (a) the <i>Notice of Appeal</i> , (b) the Statement of Reasons, and (c) any other documents filed (43 CFR 4.413). If the decision concerns the use and disposition of public lands, including land selections under the Alaska Native Claims Settlement Act, as amended, service will be made upon the Associate Solicitor, Division of Land and Water Resources, Office of the Solicitor, United States Department of the Interior, Washington, D.C. 20240. If the decision concerns the use and disposition of mineral resources, service will be made upon the Associate Solicitor, Division of Mineral Resources, Office of the Solicitor, United States Department of the Interior, Washington, D.C. 20240.
5. PROOF OF SERVICE.....	Within 15 days after any document is served on an adverse party, file proof of that service with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. This may consist of a certified or registered mail "Return Receipt Card" signed by the adverse party (43 CFR 4.401(c)).
6. REQUEST FOR STAY.....	<p>Except where program-specific regulations place this decision in full force and effect or provide for an automatic stay, the decision becomes effective upon the expiration of the time allowed for filing an appeal unless a petition for a stay is timely filed together with a <i>Notice of Appeal</i> (43 CFR 4.21). If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Interior Board of Land Appeals, the petition for a stay must accompany your <i>Notice of Appeal</i> (43 CFR 4.21 or 43 CFR 2801.10 or 43 CFR 2881.10). A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the <i>Notice of Appeal</i> and Petition for a Stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.</p> <p>Standards for Obtaining a Stay. Except as other provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards: (1) the relative harm to the parties if the stay is granted or denied, (2) the likelihood of the appellant's success on the merits, (3) the likelihood of immediate and irreparable harm if the stay is not granted, and (4) whether the public interest favors granting the stay.</p>

Unless these procedures are followed, your appeal will be subject to dismissal (43 CFR 4.402). Be certain that **all** communications are identified by serial number of the case being appealed.

NOTE: A document is not filed until it is actually received in the proper office (43 CFR 4.401(a)). See 43 CFR Part 4, subpart b for general rules relating to procedures and practice involving appeals.

(Continued on page 2)

43 CFR SUBPART 1821--GENERAL INFORMATION

Sec. 1821.10 Where are BLM offices located? (a) In addition to the Headquarters Office in Washington, D.C. and seven national level support and service centers, BLM operates 12 State Offices each having several subsidiary offices called Field Offices. The addresses of the State Offices can be found in the most recent edition of 43 CFR 1821.10. The State Office geographical areas of jurisdiction are as follows:

STATE OFFICES AND AREAS OF JURISDICTION:

Alaska State Office ----- Alaska
Arizona State Office ----- Arizona
California State Office ----- California
Colorado State Office ----- Colorado
Eastern States Office ----- Arkansas, Iowa, Louisiana, Minnesota, Missouri
and, all States east of the Mississippi River
Idaho State Office ----- Idaho
Montana State Office ----- Montana, North Dakota and South Dakota
Nevada State Office ----- Nevada
New Mexico State Office ---- New Mexico, Kansas, Oklahoma and Texas
Oregon State Office ----- Oregon and Washington
Utah State Office ----- Utah
Wyoming State Office ----- Wyoming and Nebraska

(b) A list of the names, addresses, and geographical areas of jurisdiction of all Field Offices of the Bureau of Land Management can be obtained at the above addresses or any office of the Bureau of Land Management, including the Washington Office, Bureau of Land Management, 1849 C Street, NW, Washington, DC 20240.

(Form 1842-1, September 2005)



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Vernal Field Office

170 South 500 East

Vernal, UT 84078

(435) 781-4400 Fax: (435) 781-4410



IN REPLY REFER TO:

2880

UTU-84798

(UT-084)

SEP 18 2006

Enduring Resources, LLC
475 17th Street, Suite 1500
Denver, Colorado 80202
Attn: Phyllis Sobotik

Gentlemen:

Enclosed are two copies of an unsigned right-of-way (ROW) grant (BLM Form 2800-14) for your proposed access road and well pad, serial number UTU-84798. Please review the document and if it meets with your approval, sign and date both copies and return to the address shown above. Upon our receipt of the signed documents and the fees discussed below, we will issue the ROW grant, absent any other unresolved issues.

You must pay a fee to BLM for the costs we will incur in monitoring the construction and operation of your authorized use. These fees are categorized according to the number of work hours necessary to monitor your grant, and are not refundable. We anticipate your use will require a Monitoring Category 4, which involves a fee of **\$953**. This fee must be paid prior to issuance of the grant.

Rent for use of public lands must be paid in advance of such use and prior to issuance of the ROW grant. Rent for a linear right-of-way is based on a schedule that is adjusted annually based on the Implicit Price Deflator (IPD), an inflation index. Enclosed is the rent schedule.

You have elected to pay the rent for term of the grant, 30-year. Provided you remit payment by October 1, 2006, your rent is estimated to be:

\$246.28 for the 30-year period from October 2006 to December 2036.

Please return **BOTH** signed copies of the grant, along with the monitoring fees and rent payment as discussed above by October 1, 2006. If these requirements are not met, your application may be denied.

Please be aware that you may not conduct any activities related to your right-of-way project on public land until you have received an authorized grant from this office. If you have any questions contact Paul Rodriquez, Realty Specialist, at 435-781-4409.



Robert M. Specht
Branch Chief, Lands & Compliance Branch

Enclosures:

1. Two Unsigned Right-of-Way Grants, UTU-84798
2. Monitoring Category Fee Determination
3. Rent Schedule 2-1

CONFIDENTIAL

ROW Monitoring Fee Category Determination Form for FLPMA and MLA Rights-of-Way

Application Serial Number: UTU-84798
 Applicant: Enduring Resources, LLC.
 Address: 475 17th Street, Suite 1500
 Agent: Phyllis Sobotik
 Address: Same
 Application For: Enduring Resources, LLC
 Location: T. 11 S., R. 22 E., Sec. 2, N½NW¼NW¼

Personnel Needed for Processing	Estimated Processing Hours
Realty Specialist	14
Land Law Examiner	1
Cultural	1
Paleontological Resources	1
T & E Species	2
Wildlife/Fisheries	2
Air/Water/Soils	2
Recreation/Visual	1
Range	1
Fluids/Minerals	14
Administration/Contracting	0
Manager	1
Other NEPA COORDINATOR	1
Other	
TOTAL HOURS	41

Personnel Needed for Mointoring	Estimated Processing Hours
--	-----------------------------------

The appropriate Monitoring Category for this application is Category 4. The Monitoring fee for this Category is \$953. Monitoring fees for Categories 1-4 are non-refundable. See enclosed table for Category definitions and fee schedule.

Prepared By: 12/13
 Realty Specialist

9-18-06
 Date

Approved By: [Signature]
 Authorized Officer

9/18/2006
 Date

2005 Monitoring Fee Schedule for FLPMA and MLA Rights-of-Way

Processing Category	Federal Work Hours Involved	Processing fee per application as of <u>January 1, 2006</u> . To be adjusted annually for changes in the IPD-GDP.
1. Applications for new grants, assignments, renewals, and amendments to existing grants.	Estimated Federal work hours are $>1 \leq 8$.	\$100
2. Applications for new grants, assignments, renewals, and amendments to existing grants.	Estimated Federal work hours are $> 8 \leq 24$.	\$354
3. Applications for new grants, assignments, renewals, and amendments to existing grants.	Estimated Federal work hours are $> 24 \leq 36$.	\$665
4. Applications for new grants, assignments, renewals, and amendments to existing grants.	Estimated Federal work hours are $> 36 \leq 50$.	\$953
5. Master agreements.	Varies.	As specified in the agreement.
6. Applications for new grants, assignments, renewals, and amendments to existing grants.	Estimated Federal work hours are > 50 .	Full reasonable costs (FLPMA) Full actual costs (MLA)

2806 - 2885-RIGHTS-OF-WAY MANAGEMENT
Determining CY 2006 1/Rent
Under Rental Schedule

ALL Roads, Ditches and Canals, Oil, Gas, Other Energy Pipelines

USE FOR CALENDAR YEAR 2006 ONLY 1/

Serial No.

UTU-84798

Date of Determination: September 14, 2006

Determine the 2005(12 months) rent for the R/W by multiplying the number of acres in each appropriate zone by the rental rate for that zone. All rental calculations are rounded to the nearest cents as follows:
\$97.164 is equal to \$97.16: \$97.165 is equal to \$97.17

Rental Period Date (s): October 1, 2006 thru December 31, 2036

Zone	length	width	area	divisor	acres	Rate	Annual Rental	part year factor	current year cost	USE	10 years 20 years 30 years		
											09/29/16	09/30/26	09/29/36
1			0	43560	0.000		\$0.00		\$0.00			\$0.00	\$0.00
2	30	30	900	43560	0.021	8.01	\$0.17	0.2500	\$0.04	Road	\$1.57	\$3.27	\$4.97
3			0	43560	0.000		\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
4			0	43560	0.000		\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
5			0	43560	0.000		\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
6			0	43560	0.000		\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
7			0	43560	0.000		\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
8			0	43560	0.000		\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
TEMPORARY USE PERMIT													
2	345	130	44850	43560	1.030	8.01	\$8.25	0.2500	\$2.06	OIL PAD	\$76.31	\$158.81	\$241.31

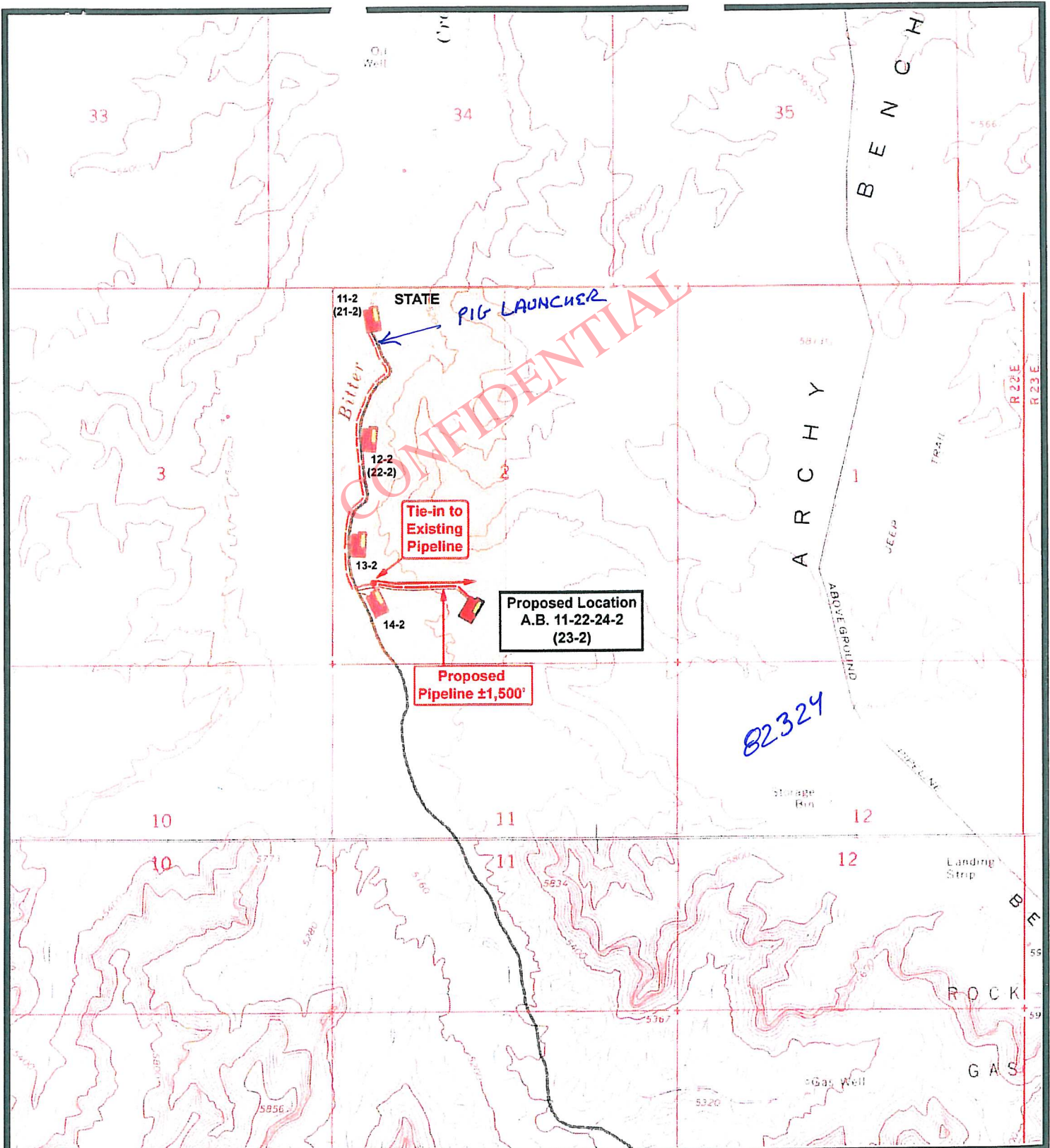
1/ May also be used for CY 2007 rent (or length of remaining rental term period) When the CY 2006 rent starts prior to receipt of the updated schedule for CY 2007. Upon receipt of the updated schedule, use the current schedule for the remainder of the current year, and use the updated schedule for the following year (s). (See manual 2801.41E6).

2/ Part year factors are:

12 months 1.0000	9 months 0.7500	6 months 0.5000	3 months 0.2500
11 months 0.9167	8 months 0.6667	5 months 0.4167	2 months 0.1667
10 months .8333	7 months 0.5833	4 months 0.3333	1 months 0.0833


Paul Rodriguez
Realty Specialist

AL's MAP OF ROW.




ENDURING RESOURCES


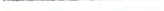

Archy Bench 11-22-24-2
Sec. 2, T11S, R22E, S.L.B.&M.



Tri-State
Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'
DRAWN BY: bgm
DATE: 06-01-2005

Legend

-  Roads
-  Existing Gas Line
-  Proposed Gas Line

TOPOGRAPHIC MAP
"D"

SHEET
10
OF 10



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Vernal Field Office

170 South 500 East

Vernal, UT 84078

(435) 781-4400 Fax: (435) 781-4410



IN REPLY REFER TO:

2880

UTU-82324

(UT-084)

SEP 18 2006

PAID BY
ALEX CC
9-19-06

CERTIFIED MAIL 70060100 0004 0586 1680

RETURN RECEIPT REQUESTED

DECISION

Enduring Resources, LLC

475 17th Street, Suite 1500

Denver, Colorado 802020

Attn: Phyllis Sobotik

Right-of-Way

Grant UTU-82324

Right-of-Way Grant UTU-82324 Issued

Rental Determined

Monitoring Fee Determined

Enclosed is a copy of your right-of-way (ROW) grant, serial number UTU-82324, which allows the use of public land for the proposed unpainted above ground 6-inch O. D. steel welded pipeline, approximately 6,320 feet long and 30 feet wide. It was approved by the BLM on September 19, 2006.

The advance rental for the ROW is determined to be **\$1,019.95** for the period from (October, 2006) to (December, 2036). BLM has received your advance rental for this period.

The monitoring fee for this ROW is determined to be a Category 4, which is **\$953**. BLM has received your monitoring fee.

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and the enclosed Form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (at the above address) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition (request) pursuant to regulation 43 CFR 2801.10 or 43 CFR 2881.10 for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must


also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied,
- (2) The likelihood of the appellant's success on the merits,
- (3) The likelihood of immediate and irreparable harm if the stay is not granted, and
- (4) Whether the public interest favors granting the stay.

If you have any questions, please contact Paul Rodriquez, Realty Specialist, at (435) 781-4409.



Robert M. Specht
Branch Chief,
Land & Surface Compliance

Enclosure (s):
Signed Right-of-Way Grant, UTU-82324
Form 1842-1

FORM 2800-14
(August 1985)

Issuing Office
Vernal Field Office

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
RIGHT-OF-WAY GRANT

SERIAL NUMBER UTU-82324

1. A right-of-way is hereby granted pursuant to Section 28 of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 185).
2. Nature of Interest:
 - a. By this instrument, the holder:

Enduring Resources, LLC.
475 17th Street, Suite 1500
Denver, Colorado 80202

Receives a right to construct, operate, maintain, terminate and reclaim a unpainted surface steel welded six (6) inch steel pipeline, valves, pig launchers, pig catchment, meter houses and associated infrastructure. Valves would be place throughout the pipeline, pig launcher would be located approximately in or around the 11-22-11-2 oil pad, pig catchment would be located approximately in or around the 11-22-44-2, and meter houses would be located within 500 feet of the wellhead at all well pads. Associated infrastructures facilities would consist of production tanks, water tanks, heater treater, and pumping units would be located on the disturbed portion of the well pad and a t a minimum of 25 feet from the toe of the back slope or top of the fill slope. The proposed pipeline would tie to and existing pipeline within the project area, Located on public lands described as follows:

Salt Lake Meridian, Utah
Township 11 South, Range 22 East.
Sec. 2, lot 5, S $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$

- b. The right-of-way area granted herein is 30 feet wide and 6,320 feet long and contains 4.35 acres, more or less.
 - c. This instrument shall terminate upon the expiration of the lease or the Grant, December 31, 2036, unless, prior thereto, it is relinquished, abandoned, terminated, or modified pursuant to the terms and conditions of this instrument or of any applicable Federal law or regulation.
 - d. This instrument may be renewed or assigned. If renewed or assigned, the right-of-way shall be subject to the regulations existing at the time of renewal or assignment and any other terms and

conditions that the authorized officer deems necessary to protect the public interest.

- e. Notwithstanding the expiration of this instrument or any renewal thereof, early relinquishment, abandonment, or termination, the provisions of this instrument, to the extent applicable, shall continue in effect and shall be binding on the holder, its successors, or assigns, until they have fully satisfied the obligations and/or liabilities accruing herein before or on account of the expiration, or prior termination, of the grant.
- f. This instrument shall terminate upon the expiration of or December 31, 2036, unless, prior thereto, it is relinquished, abandoned, terminated, or modified pursuant to the terms and conditions of this instrument or of any applicable Federal law or regulation.
- g. This instrument may be renewed. If renewed, the right-of-way shall be subject to the regulations existing at the time of renewal and any other terms and conditions that the authorized officer deems necessary to protect the public interest.

3. Rental:

For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management fair market value rental as determined by the authorized officer unless specifically exempted from such payment by regulation. Provided, however, that the rental may be adjusted by the authorized officer, whenever necessary, to reflect changes in the fair market rental value as determined by the application of sound business management principles, and so far as practicable and feasible, in accordance with comparable commercial practices. Rental payments, if applicable, should be submitted to the following address:

BLM Vernal Field Office
170 South 500 East
Vernal, Utah 84078

4. Terms and Conditions:

- a. This grant is issued subject to the holder's compliance with all applicable regulations contained in Title 43 Code of Federal Regulations part 2800.
- b. Upon grant termination by the authorized officer, all improvements shall be removed from the public lands within 90 days, or otherwise disposed of as provided in paragraph (4)(d) or as directed by the authorized officer.
- c. Each grant issued for a term of 30 years or more shall, at a minimum, be reviewed by the authorized officer at the end of the 20th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that a right-of-way granted herein may be reviewed at any time deemed necessary by the authorized officer.
- d. The maps set forth in Exhibit A, dated June 6, 2005, and attached hereto, are incorporated into

and made a part of this grant instrument as fully and effectively as if it were set forth herein in its entirety.

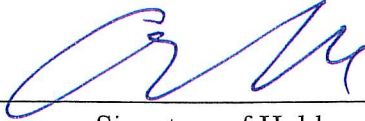
- e. Failure of the holder to comply with applicable law or any provision of this right-of-way grant shall constitute grounds for suspension or termination thereof.
- f. The holder shall perform all operations in a good and workmanlike manner so as to ensure protection of the environment and the health and safety of the public.
- g. Once the location is abandoned, it shall be recontoured to natural contours, topsoil respread where appropriate, and the entire location seeded with the recommended seed mix. Seeding should take place by broadcasting the seed and walking it into the soil with a dozer immediately after the dirt work is completed.
- h. Any cultural and/or paleontological resource (historic or prehistoric site or object or fossil) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery shall be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder shall be responsible for the cost of evaluation and a decision as to proper mitigation measures shall be made by the authorized officer after consulting with the holder.
- i. Interim Reclamation Seed Mix for location:

Hycrest Crested Wheatgrass	<i>Agropyron cristatum</i>	4lbs. /acre
Needle and Threadgrass	<i>Stipa comata</i>	4lbs. /acre
Indian Ricegrass	<i>Pleuraphis hymenoides</i>	4lbs. /acre

- Certified weed free seed and straw shall be used for final and interim reclamation. The operator shall submit a receipt with certification for the seed and any straw used on location.
- The above listed seed mix shall be used to seed all unused portions of the pad including the topsoil and stock piles, and the reserve pits. Re-seeding may be required if the first seeding is not successful.
- The seed shall be drilled or disked into the ground or hand broadcast onto the ground. Planting depth shall not exceed one-half inch using a seed drill. If the seed is hand broadcast then the seed mixture shall be doubled and the area raked or chained to cover the seed.
- There shall be no primary or secondary noxious weeds in the seed mixture.
- All pounds are in pure live seed.

- Reseeding may be required if first seeding is not successful.
- j. The holder shall reclaim the right-of-way route by re-contouring and re-seeding disturbed areas as prescribed by the authorized officer. Ninety percent pure live seed will be used. The seed shall be applied by a drill equipped with a depth regulator. Planting depth shall not exceed one-half inch. Where drilling is not possible, the seed shall be broadcast at twice the recommended rate of application and the area shall be raked or chained to cover the seed.
- k. No vehicle travel, construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support vehicles and/or construction equipment. If such equipment creates ruts in excess of four inches deep, the soil shall be deemed too wet to adequately support construction equipment.
- l. All production facilities, i.e. pump, pump house, storage tanks, oil-water separator, galvanized dikes, propane tanks, etc. shall be painted with a lusterless color (Carlsbad Canyon). All facilities shall be painted within six (6) months of installation.

IN WITNESS WHEREOF, The undersigned agrees to the terms and conditions of this right-of-way grant.



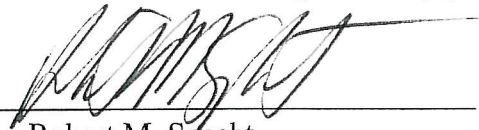
Signature of Holder

Vice President

(Title)

09/19/06

(Date)



Robert M. Specht

Branch Chief

Authorized Officer

(Title)

9/19/2006

(Effective Date of Grant)

Form 1842-1
(April 2006)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INFORMATION ON TAKING APPEALS TO THE INTERIOR BOARD OF LAND APPEALS

DO NOT APPEAL UNLESS

1. This decision is adverse to you,
AND
2. You believe it is incorrect

IF YOU APPEAL, THE FOLLOWING PROCEDURES MUST BE FOLLOWED

1. NOTICE OF APPEAL	A person served with the decision being appealed must transmit the <i>Notice of Appeal</i> in time for it to be filed in the office where it is required to be filed within 30 days after the date of service. If a decision is published in the FEDERAL REGISTER, a person not served with the decision must transmit a <i>Notice of Appeal</i> in time for it to be filed within 30 days after the date of publication (43 CFR 4.411 and 4.413).
2. WHERE TO FILE NOTICE OF APPEAL WITH COPY TO SOLICITOR....	Bureau of Land Management, Vernal Field Office, 170 South 500 East, Vernal, Utah 84078 Regional Solicitor Intermountain Region, Department of the Interior, Room 6201 Federal Bldg, 125 South State Street, Salt Lake City, Utah 84143
3. STATEMENT OF REASONS WITH COPY TO SOLICITOR.....	Within 30 days after filing the <i>Notice of Appeal</i> , file a complete statement of the reasons why you are appealing. This must be filed with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. If you fully stated your reasons for appealing when filing the <i>Notice of Appeal</i> , no additional statement is necessary (43 CFR 4.412 and 4.413). Regional solicitor Intermountain Region, Department of the Interior, Room 6201 Federal Bldg, 125 South State Street, Salt
4. ADVERSE PARTIES	Within 15 days after each document is filed, each adverse party named in the decision and the Regional Solicitor or Field Solicitor having jurisdiction over the State in which the appeal arose must be served with a copy of: (a) the <i>Notice of Appeal</i> , (b) the Statement of Reasons, and (c) any other documents filed (43 CFR 4.413). If the decision concerns the use and disposition of public lands, including land selections under the Alaska Native Claims Settlement Act, as amended, service will be made upon the Associate Solicitor, Division of Land and Water Resources, Office of the Solicitor, United States Department of the Interior, Washington, D.C. 20240. If the decision concerns the use and disposition of mineral resources, service will be made upon the Associate Solicitor, Division of Mineral Resources, Office of the Solicitor, United States Department of the Interior, Washington, D.C. 20240.
5. PROOF OF SERVICE	Within 15 days after any document is served on an adverse party, file proof of that service with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. This may consist of a certified or registered mail "Return Receipt Card" signed by the adverse party (43 CFR 4.401(c)).
6. REQUEST FOR STAY	Except where program-specific regulations place this decision in full force and effect or provide for an automatic stay, the decision becomes effective upon the expiration of the time allowed for filing an appeal unless a petition for a stay is timely filed together with a <i>Notice of Appeal</i> (43 CFR 4.21). If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Interior Board of Land Appeals, the petition for a stay must accompany your <i>Notice of Appeal</i> (43 CFR 4.21 or 43 CFR 2801.10 or 43 CFR 2881.10). A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the <i>Notice of Appeal</i> and Petition for a Stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted. Standards for Obtaining a Stay. Except as other provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards: (1) the relative harm to the parties if the stay is granted or denied, (2) the likelihood of the appellant's success on the merits, (3) the likelihood of immediate and irreparable harm if the stay is not granted, and (4) whether the public interest favors granting the stay.

Unless these procedures are followed, your appeal will be subject to dismissal (43 CFR 4.402). Be certain that **all** communications are identified by serial number of the case being appealed.

NOTE: A document is not filed until it is actually received in the proper office (43 CFR 4.401(a)). See 43 CFR Part 4, subpart b for general rules relating to procedures and practice involving appeals.

(Continued on page 2)

43 CFR SUBPART 1821--GENERAL INFORMATION

Sec. 1821.10 Where are BLM offices located? (a) In addition to the Headquarters Office in Washington, D.C. and seven national level support and service centers, BLM operates 12 State Offices each having several subsidiary offices called Field Offices. The addresses of the State Offices can be found in the most recent edition of 43 CFR 1821.10. The State Office geographical areas of jurisdiction are as follows:

STATE OFFICES AND AREAS OF JURISDICTION:

Alaska State Office ----- Alaska
Arizona State Office ----- Arizona
California State Office ----- California
Colorado State Office ----- Colorado
Eastern States Office ----- Arkansas, Iowa, Louisiana, Minnesota, Missouri
and, all States east of the Mississippi River
Idaho State Office ----- Idaho
Montana State Office ----- Montana, North Dakota and South Dakota
Nevada State Office ----- Nevada
New Mexico State Office ---- New Mexico, Kansas, Oklahoma and Texas
Oregon State Office ----- Oregon and Washington
Utah State Office ----- Utah
Wyoming State Office ----- Wyoming and Nebraska

(b) A list of the names, addresses, and geographical areas of jurisdiction of all Field Offices of the Bureau of Land Management can be obtained at the above addresses or any office of the Bureau of Land Management, including the Washington Office, Bureau of Land Management, 1849 C Street, NW, Washington, DC 20240.

(Form 1842-1, September 2005)



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Vernal Field Office

170 South 500 East

Vernal, UT 84078

(435) 781-4400 Fax: (435) 781-4410



IN REPLY REFER TO:

2880

UTU-82324

(UT-084)

SEP 18 2006

Enduring Resources, LLC
475 17th Street, Suite 1500
Denver, Colorado 80202
Attn: Phyllis Sobotik

Gentlemen:

Enclosed are two copies of an unsigned right-of-way (ROW) grant (BLM Form 2800-14) for your proposed 6-inch O. D. welded steel pipeline, above ground and unpainted, approximately 6,320 feet long and 30 feet wide. The pipelines would be for the Archy Bench 11-22-13-2, 11-22-14-2, 11-22-11-2, and 11-22-12-2, serial number UTU-82324. Please review the document and if it meets with your approval, sign and date both copies and return to the address shown above. Upon our receipt of the signed documents and the fees discussed below, we will issue the ROW grant, absent any other unresolved issues.

You must pay a fee to BLM for the costs we will incur in monitoring the construction and operation of your authorized use. These fees are categorized according to the number of work hours necessary to monitor your grant, and are not refundable. We anticipate your use will require a Monitoring Category 4, which involves a fee of \$953. This fee must be paid prior to issuance of the grant.

Rent for use of public lands must be paid in advance of such use and prior to issuance of the ROW grant. Rent for a linear right-of-way is based on a schedule that is adjusted annually based on the Implicit Price Deflator (IPD), an inflation index. Enclosed is the rent schedule.

You have elected to pay the rent for term of the grant, 30-year. Provided you remit payment by October 1, 2006, your rent is estimated to be:

\$1,01.95704.64 for the 30-year period from October 2006 to December 2036.

Please return **BOTH** signed copies of the grant, along with the monitoring fees and rent payment as discussed above by October 1, 2006. If these requirements are not met, your application may be denied.

Please be aware that you may not conduct any activities related to your right-of-way project on public land until you have received an authorized grant from this office. If you have any questions contact Paul Rodriquez, Realty Specialist, at 435-781-4409.



Robert M. Specht
Branch Chief, Lands & Compliance Branch

Enclosures:

1. Two Unsigned Right-of-Way Grants, UTU-82324
2. Monitoring Category Fee Determination
3. Rent Schedule 2-1

ROW Monitoring Fee Category Determination Form for FLPMA and MLA Rights-of-Way

Application Serial Number: UTU-82324

Applicant: Enduring Resources, LLC.

Address: 475 17th Street, Suite 1500

Agent: Phyllis Sobotik

Address: Same

Application For: Enduring Resources, LLC

Location: T. 11 S., R. 22 E., Sec. 2, S $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ S $\frac{1}{2}$ SW $\frac{1}{4}$.

Personnel Needed for Processing	Estimated Processing Hours
Realty Specialist	14
Land Law Examiner	1
Cultural	1
Paleontological Resources	1
T & E Species	2
Wildlife/Fisheries	2
Air/Water/Soils	2
Recreation/Visual	1
Range	1
Fluids/Minerals	14
Administration/Contracting	0
Manager	1
Other NEPA COORDINATOR	1
Other	
TOTAL HOURS	41

Personnel Needed for Mointoring	Estimated Processing Hours
--	-----------------------------------

The appropriate Monitoring Category for this application is Category 4. The Monitoring fee for this Category is \$953. Monitoring fees for Categories 1-4 are non-refundable. See enclosed table for Category definitions and fee schedule.

Prepared By: [Signature]
Realty Specialist

9-18-06
Date

Approved By: [Signature]
Authorized Officer

9/18/2006
Date

2005 Monitoring Fee Schedule for FLPMA and MLA Rights-of-Way		
Processing Category	Federal Work Hours Involved	Processing fee per application as of <u>January 1, 2006</u>. To be adjusted annually for changes in the IPD-GDP.
1. Applications for new grants, assignments, renewals, and amendments to existing grants.	Estimated Federal work hours are $>1 \leq 8$.	\$100
2. Applications for new grants, assignments, renewals, and amendments to existing grants.	Estimated Federal work hours are $> 8 \leq 24$.	\$354
3. Applications for new grants, assignments, renewals, and amendments to existing grants.	Estimated Federal work hours are $> 24 \leq 36$.	\$665
4. Applications for new grants, assignments, renewals, and amendments to existing grants.	Estimated Federal work hours are $> 36 \leq 50$.	\$953
5. Master agreements.	Varies.	As specified in the agreement.
6. Applications for new grants, assignments, renewals, and amendments to existing grants.	Estimated Federal work hours are > 50 .	Full reasonable costs (FLPMA) Full actual costs (MLA)

2806 - 2885-RIGHTS-OF-WAY MANAGEMENT
Determining CY 2006 1/Rent
Under Rental Schedule

ALL Roads, Ditches and Canals, Oil, Gas; Other Energy Pipelines

USE FOR CALENDAR YEAR 2006 ONLY 1/

Serial No.

UTU-82324

Date of Determination: September 14, 2006

Determine the 2005(12 months) rent for the RAW by multiplying the number of acres in each appropriate zone by the rental rate for that zone. All rental calculations are rounded to the nearest cents as follows:
\$97.164 is equal to \$97.16; \$97.165 is equal to \$97.17

Rental Period Date (s): October 1, 2006 thru December 31, 2036

Zone	length	width	area	divisor	acres	Rate	Annual Rental	part year factor	current year cost	USE	10 years	20 years	30 years
1			0	43560		0.000	\$0.00		\$0.00				
2	6320	30	189600	43560		4.353	\$34.87	0.2500	\$8.72	Road	\$322.55	\$671.25	\$1,019.95
3			0	43560		0.000	\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
4			0	43560		0.000	\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
5			0	43560		0.000	\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
6			0	43560		0.000	\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
7			0	43560		0.000	\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
8			0	43560		0.000	\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
TEMPORARY USE PERMIT													
2			0	43560		0.000	\$0.00	0.2500	\$0.00				

1/ May also be used for CY 2007 rent (or length of remaining rental term period) When the CY 2006 rent starts prior to receipt of the updated schedule for CY 2007. Upon receipt of the updated schedule, use the current schedule for the remainder of the current year, and use the updated schedule for the following year (s). (See manual 2801.41E6).

2/ Part year factors are:

12 months 1.0000	9 months 0.7500	6 months 0.5000	3 months 0.2500
11 months 0.9167	8 months 0.6667	5 months 0.4167	2 months 0.1667
10 months .8333	7 months 0.5833	4 months 0.3333	1 months 0.0833

Paul Rodriguez
Realty Specialist

MOAC# 05-197

Paleontological Reconnaissance Report

Enduring Resources Proposed Well Pads, Access Roads and Pipeline Corridors for Archy Bench #11-22-11-2, #11-22-12-2, #11-22-13-2, #11-22-14-2, #11-22-24-2 (Sec. 2, T 11 S, R 22 E); Red Wash #9-24-23-30, #9-24-34-30 (Sec. 30 T 9 S, R 24 E); Red Wash ³⁴ *Bonanza* #9-24-24-23 (Sec. 23, T 9 S, R 24 E); Southam Canyon #9-24-41-34 (Sec. 34, T 9 S, R 24 E); Southam Canyon #9-24-23-36, #9-24-24-36 (Sec. 36, T 9 S, R 24 E); Southam Canyon #10-25-11-6 (Sec. 6, T 10 S, R 25 E)

Archy Bench, Bonanza, Red Wash SE,
and Southam Canyon Topographic
Quadrangles Uintah County, Utah

July 19, 2005

Prepared by Andrew W. Stanton
Paleontologist for
Montgomery Archaeological Consultants
Box 147, 322 East 100 South
Moab, Utah 84532

INTRODUCTION

At the request of Phyllis Sobotik, of Enduring Resources, LLC, and authorized by John Mayers of the BLM Vernal Field Office and James Kirkland of the Office of the State Paleontologist a paleontological reconnaissance survey of Enduring's proposed Well Pads, Access Roads and Pipeline Corridors for Archy Bench #11-22-11-2, #11-22-12-2, #11-22-13-2, #11-22-14-2, #11-22-24-2 (Sec. 2, T 11 S, R 22 E); Red Wash #9-24-23-30, #9-24-34-30 (Sec. 30, T 9 S, R 24 E); Red Wash #9-24-24-23 (Sec. 23, T 9 S, R 24 E); Southam Canyon #9-24-41-34 (Sec. 34, T 9 S, R 24 E); Southam Canyon #9-24-23-36, #9-24-24-36 (Sec. 36, T 9 S, R 24 E); Southam Canyon #10-25-11-6 (Sec. 6, T 10 S, R 25 E) was conducted by Stephen Sandau June 8-11, 2005. The survey was conducted under the Utah BLM Paleontological Resources Use Permit #UT-S-05-33 and the Utah Paleontological Investigations Permit #04-345. This survey to collect any paleontological materials discovered during the construction processes in danger of damage or destruction was done to meet requirements of the National Environmental Policy Act of 1969, and other State and Federal laws and regulations that protect paleontological resources.

FEDERAL AND STATE REQUIREMENTS

As mandated by the US Department of the Interior Bureau of Land Management, paleontologically sensitive geologic formations in BLM lands that are considered for exchange or may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

- 1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et. Seq., P.L. 91-190);
- 2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579).
- 3) The National Historic preservation Act. 16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320; and
- 4) The Utah Geological Survey. S. C. A.: 63-73-1. (1-21) and U.C.A.: 53B-17-603

Under policy dictated by the BLM Manual and Handbook H-8270-1 (July, 1998) formations are ranked according to their paleontological potential:

- *Condition 1* is applied to those areas known to contain fossil localities, and special consideration of the known resources is in need of evaluation.
- *Condition 2* is applied to areas that have exposures of geologic rock units known to have produced fossils elsewhere.
- *Condition 3* is applied to areas unlikely to produce fossils based on surficial geology.

Although these guidelines apply mostly to vertebrate fossils on lands under the direction of the BLM, they are equally designed to help protect rare plant and invertebrate fossils and will be used here with reference to State managed lands. It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

LOCATION

This project covers wells on land managed by the State of Utah Trust Lands Administration (SITLA) and on BLM land. The well pads and proposed pipeline corridor for Enduring's Archy Bench #11-22-11-2, #11-22-12-2, #11-22-13-2, #11-22-14-2, #11-22-24-2 (Sec. 2, T 11 S, R 22 E) are four to five miles south by southwest of the White River, and some fifteen miles south west of Bonanza, UT. Red Wash #9-24-23-30, #9-24-34-30 (Sec. 30, T 9 S, R 24 E) lies approximately 3 miles north of the White River and four to five miles west of Bonanza, UT; Red Wash #9-24-24-23 (Sec. 23, T 9 S, R 24 E) is on the southwestern outskirts of Bonanza, UT; Southam Canyon #9-24-41-34 (Sec. 34, T 9 S, R 24 E) is about one and one half miles south by southwest of Bonanza; Southam Canyon #9-24-23-36, #9-24-24-36 (Sec. 36, T 9 S, R 24 E) and Southam Canyon #10-25-11-6 (Sec. 6, T 10 S, R 25 E) are approximately three miles south of Bonanza, UT and one to one and a half miles north of the White River. The project areas can be found on the Archy Bench, Bonanza, Red Wash SE, and Southam Canyon Topographic Quadrangles, Uintah County, Utah

PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) and ranges in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992), and fauna (Black and Dawson, 1966) of North America.

GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic, deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events occurring during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded coarse-grained sandstone and conglomerates

preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta, and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929), and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt and mudstone and westward flowing channel sands, fluvial clays, and muds in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931) biostratigraphy (Flynn, 1986; Prothero, 1996). Well known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt, and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation, and it was later changed to the "Duchesne River Formation" by Kay (1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, Lapoint, and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

FIELD METHODS

In order to determine if the proposed pipeline corridors, access roads and well pads from this project contained any paleontological resources, a brief reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary, because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces, and are of particular importance.

PROJECT AREA

The project site is situated in the Wagonhound Member (Uinta A & B) of the Uinta Formation.

Archy Bench #11-22-11-2

The proposed well pad lies adjacent to an existing access road in the NW/NW quarter-quarter section of Sec. 2, T 11 S, R 22 E (Figure 1). A proposed pipeline follows the path of this road and ties into an existing pipeline in the SW/SW quarter-quarter section of Sec. 2, T 11 S, R 22 E. The proposed pad and pipeline rest on sage brush covered soil and colluvium. The surrounding slopes and ridges to the east consist of interbedded green, purple and tan colored silt and sandstone. Ledges of tan sandstone and silt lie to the west of the proposed well pad. No fossils were found at this site.

Archy Bench #11-22-12-2

The proposed well pad lies adjacent to an existing access road in the SW/NW quarter-quarter section of Sec. 2, T 11 S, R 22 E (Figure 1). The proposed well pad rests on soil and colluvium covered ground. Cliffs of tan sandstone lie to the east of the pad area. No fossils were found in the proposed construction site.

Archy Bench #11-22-13-2

The proposed well pad lies adjacent to an existing access road in the NW/SW quarter-quarter section of Sec. 2, T 11 S, R 22 E (Figure 1). The ground is covered with sandy soil and colluvium, and is vegetated with brush. No fossils were found at this locality.

Archy Bench #11-22-14-2

The proposed well pad lies adjacent to an existing access road in the SW/SW quarter-quarter section of Sec. 2, T 11 S, R 22 E (Figure 1). The area consists of soil covered ground and is vegetated with brush. No fossils were found in the proposed construction site.

Archy Bench #11-22-24-2

The proposed well pad is in the SE/SW quarter-quarter section of Sec. 2, T 11 S, R 22 E (Figure 1). The proposed access and pipeline tie in at the SW/SW quarter-quarter section of Sec. 2, T 11 S, R 22 E. The area consists of soil covered ground, and an outcrop of tan sandstone and siltstone lies off the eastern edge of the pad. No fossils were found within the proposed construction site.

Red Wash #9-24-23-30

The proposed access road and pipeline begin in the NW/SE quarter-quarter section and end in the NE/SW quarter-quarter section of Sec. 30, T 11 S, R 22 E (Figure 2). The area consists of soil covered ground vegetated with grass and low brush. No fossils were found in the proposed construction area.

Red Wash #9-24-34-30

The proposed short access road, pipeline and well pad lie in the SW/SE quarter-quarter section of Sec. 30, T 9 S, R 24 E (Figure 2). The ground is soil covered and vegetated with brush and grass. No fossils were found at this site.

Bonanza 34
Red Wash #9-24-24-23

The proposed well pad and short access are located in the SW/SE quarter-quarter section of Sec. 23, T 9 S, R 24 E, and the proposed long pipeline begins in the NW/NE quarter-quarter section of Sec. 27, T 9 S, R 24 E, following the path of an existing road, and then follows the path of the proposed access road (Figure 3). The area consists of rolling hills of soil covered ground vegetated with sage and grass. No fossils were found at this site.

Southam Canyon #9-24-41-34

The proposed well pad lies in the NE/NE quarter-quarter section of Sec. 34, T 9 S, R 24 E. The proposed access road begins in the NW/NE quarter-quarter section of Sec. 34, T 9 S, R 24 E, and the proposed long pipeline begins in the NW/NE quarter-quarter section of Sec. 27, T 9 S, R 24 E, follows the path of an existing road, the follows the path of the proposed access road (Figure 3). The ground is covered with soil and is vegetated with sage. Along the proposed access road are some exposures of tan sandstone with brown concretions, along with green silt and mudstone. No fossils were found in the proposed construction area.

Southam Canyon #9-24-23-36

The proposed well pad, short access road and pipeline lie in the NE/NW quarter-quarter section of Sec. 36, T 9 S, R 24 E. The proposed access road and pipeline tie into the proposed access and pipeline for Southam Canon #9-24-24-36 (Figure 4). The area consists of soil covered ground with colluvium and some exposures of tan sandstone. No fossils were found in the proposed construction site.

Southam Canyon #9-24-24-36

The long proposed access road and pipeline begin in the SE/NE quarter-quarter section of Sec. 36, T 9 S, R 24 E, head southwest and enter the proposed well pad from the northwest in the SE/SW quarter-quarter section of Sec. 36, T 9 S, R 24 E (Figure 4). The area around the proposed access road has outcrops of tan sandstone containing petrified wood. No other fossils were found in the proposed construction area.

Southam Canyon #10-25-11-6

The proposed well pad and access road lie in the NW/NW quarter-quarter section of Sec. 6, T 10 S, R 25 E. The 2,900 ft. access enters the well pad from the south (Figure 4). To the northeast of the proposed well pad are outcrops of tan sandstone, and along the western flank of the southern extremity of access road are tan silt and shale in which was found fossils plant material and fish scales.

SURVEY RESULTS

WELL	GEOLOGY	PALEONTOLOGY
Archy Bench #11-22-11-2 (Sec. 2, T 11 S, R 22 E)	The pad and pipeline rest on sage brush covered soil and colluvium. The surrounding slopes and ridges to the east consist of interbedded green, purple and tan colored silt and sandstone. Ledges of tan sandstone and silt lie to the west of the proposed well pad.	No fossils were found. Condition 3.
Archy Bench #11-22-12-2 (Sec. 2, T 11 S, R 22 E)	The proposed well pad rests on soil and colluvium covered ground. Cliffs of tan sandstone lie to the east of the pad area.	No fossils were found. Condition 3.
Archy Bench #11-22-13-2 (Sec. 2, T 11 S, R 22 E)	The ground is covered with sandy soil and colluvium.	No fossils were found. Condition 3.
Archy Bench #11-22-14-2 (Sec. 2, T 11 S, R 22 E)	The area consists of soil covered ground.	No fossils were found. Condition 3.
Archy Bench #11-22-24-2 (Sec. 2, T 11 S, R 22 E)	The area consists of soil covered ground, and an outcrop of tan sandstone and siltstone lies off the eastern edge of the pad.	No fossils were found. Condition 3.
Red Wash #9- 24-23-30 (Sec. 30, T 9 S, R 24 E)	The area consists of soil covered ground.	No fossils were found. Condition 3.
Red Wash #9- 24-34-30 (Sec. 30, T 9 S, R 24 E)	The ground is soil covered.	No fossils were found. Condition 3.
Red Wash #9-24-24-23 (Sec. 23, T 9 S, R 24 E)	The area consists of rolling hills of soil covered ground.	No fossils were found. Condition 3.
Southam Canyon #9-24- 41-34 (Sec. 34, T 9 S, R 24 E)	The ground is covered with soil. Along the proposed access road are some exposures of tan sandstone with brown concretions, along with green silt and mudstone.	No fossils were found. Condition 3.

Southam Canyon #9-24-23-36 (Sec. 36, T 9 S, R 24 E)	The area consists of soil covered ground with colluvium and some exposures of tan sandstone.	No fossils were found. Condition 3.
Southam Canyon #9-24-24-36 (Sec. 36, T 9 S, R 24 E)	The area around the proposed access road has outcrops of tan sandstone containing petrified wood.	Plant fossils were found. Condition 2.
Southam Canyon #10-25-11-6 (Sec. 6, T 10 S, R 25 E)	To the northeast of the proposed well pad are outcrops of tan sandstone, and along the western flank of the southern extremity of access road are tan silt and shale in which was found fossils plant material and fish scales.	Plant impressions and fish scales were found. Condition 2.

RECOMMENDATIONS

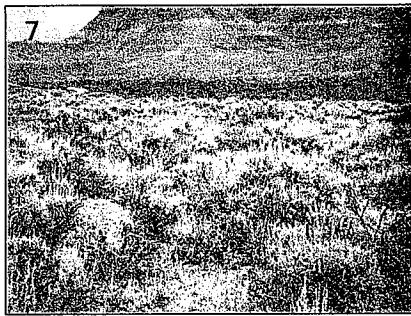
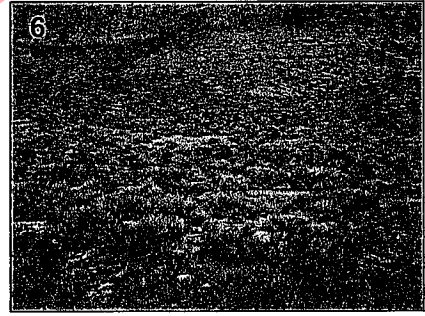
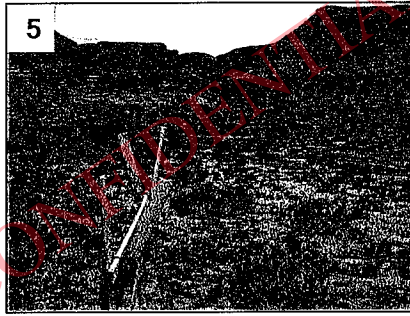
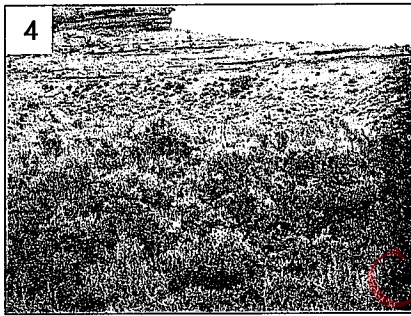
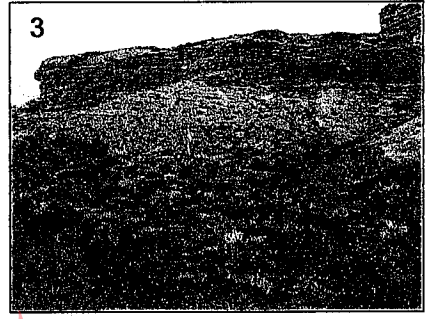
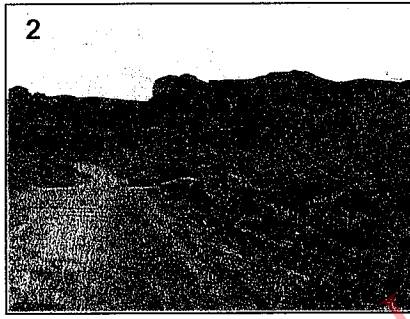
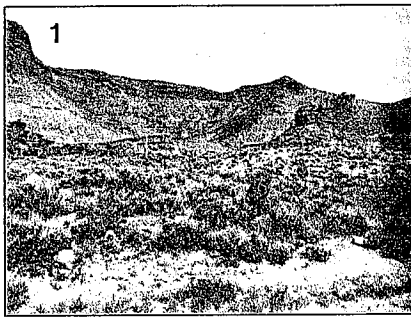
The reconnaissance survey executed for Enduring's proposed Well Pads, Access Roads and Pipeline Corridors for Archy Bench #11-22-11-2, #11-22-12-2, #11-22-13-2, #11-22-14-2, #11-22-24-2 (Sec. 2, T 11 S, R 22 E); Red Wash #9-24-23-30, #9-24-34-30 (Sec. 30, T 9 S, R 24 E); Red Wash #9-24-24-23 (Sec. 23, T 9 S, R 24 E); Southam Canyon #9-24-41-34 (Sec. 34, T 9 S, R 24 E); Southam Canyon #9-24-23-36, #9-24-24-36 (Sec. 36, T 9 S, R 24 E); Southam Canyon #10-25-11-6 (Sec. 6, T 10 S, R 25 E) was brief.

The localities for Southam Canyon #9-24-24-36 (Sec. 36, T 9 S, R 24 E) and #10-25-11-6 (Sec. 6, T 10 S, R 25 E) both yielded plant fossils, the latter also contained fish scales. No monitoring of these sites is recommended unless more substantial fossil material is found.

The staked areas at the remainder of the sites, namely Archy Bench #11-22-11-2, #11-22-12-2, #11-22-13-2, #11-22-14-2, #11-22-24-2 (Sec. 2, T 11 S, R 22 E); Red Wash #9-24-23-30, #9-24-34-30 (Sec. 30, T 9 S, R 24 E); Red Wash #9-24-24-23 (Sec. 23, T 9 S, R 24 E); Southam Canyon #9-24-41-34 (Sec. 34, T 9 S, R 24 E); Southam Canyon #9-24-23-36 (Sec. 36, T 9 S, R 24 E) showed no signs of fossil materials inside of the proposed construction sites. Therefore, no credible reason to limit construction within the staked areas was found.

However, if vertebrate fossil(s) are found during construction of any of the other locations covered in this report, recommendations are that a paleontologist is immediately notified in order to collect fossil materials in danger of being destroyed. Any vertebrate fossils found should be carefully moved outside of the construction areas to be checked by a permitted paleontologist.

Figure 1 *continued...*



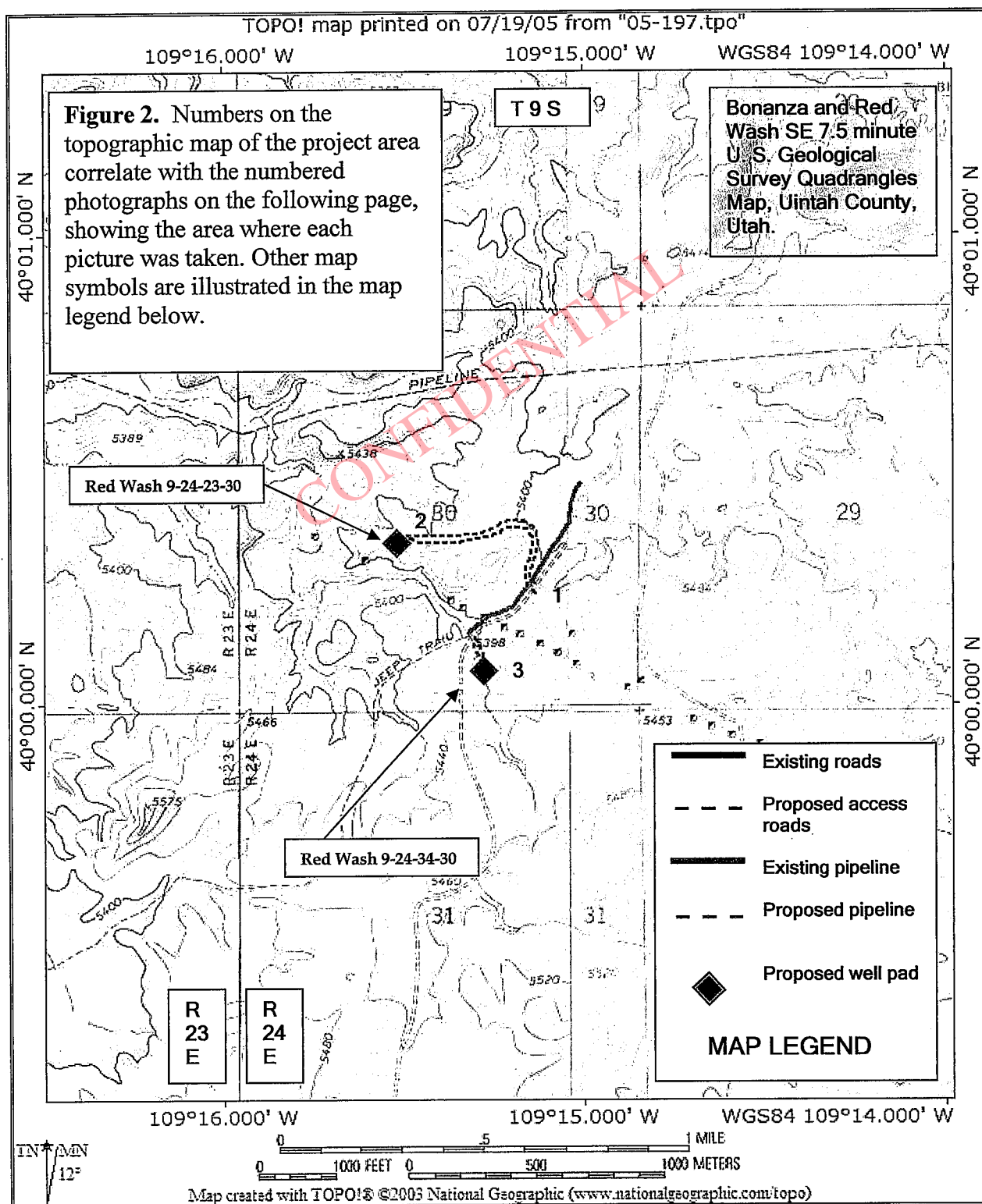
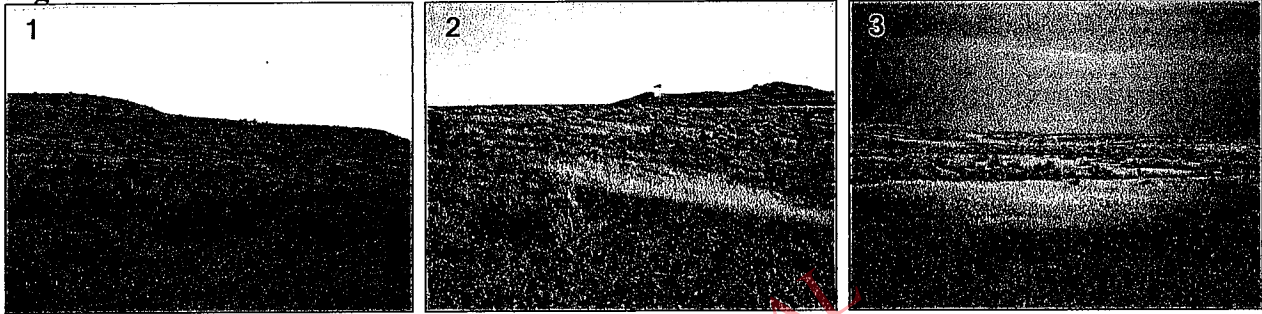


Figure 2 continued...



CONFIDENTIAL

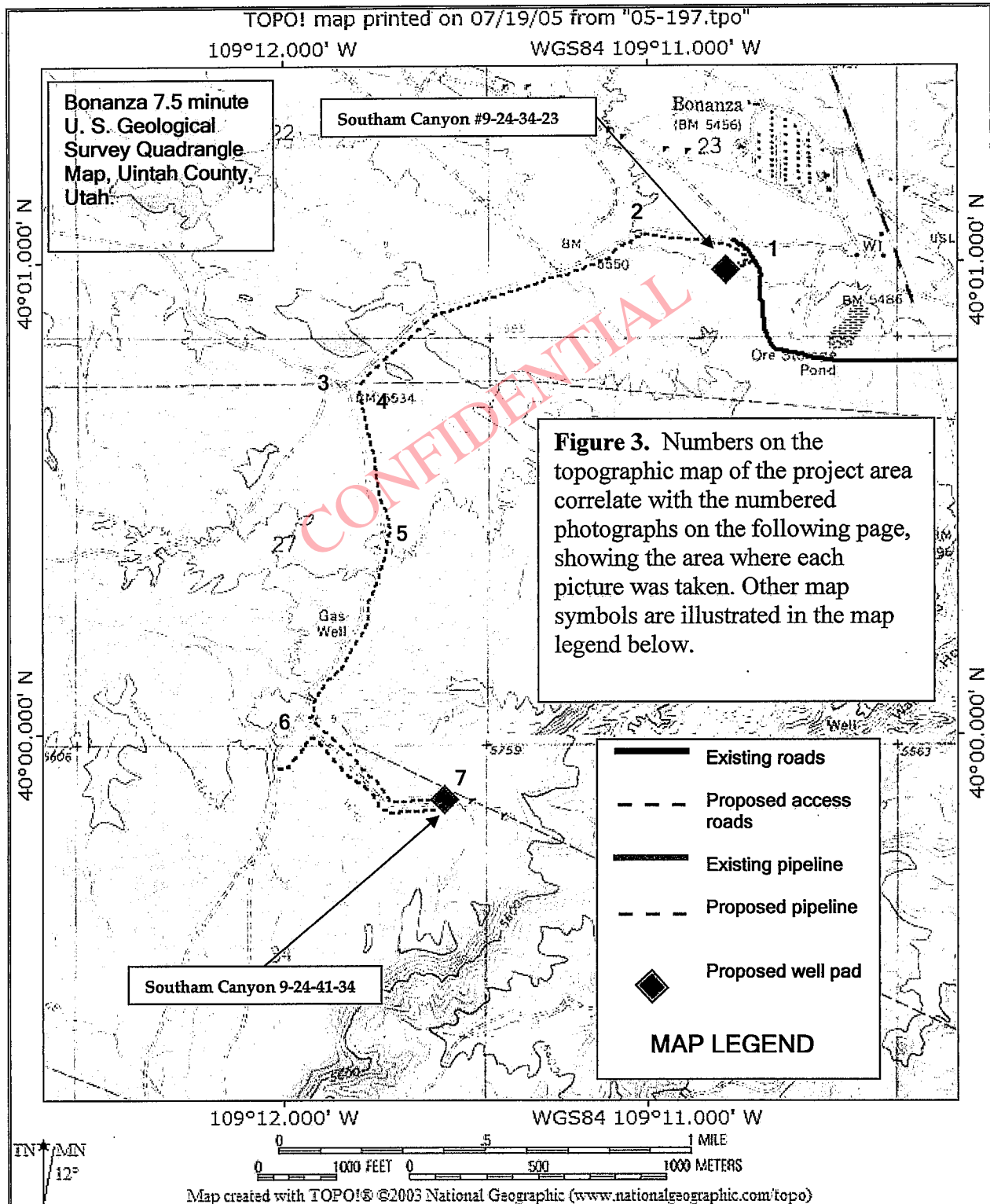
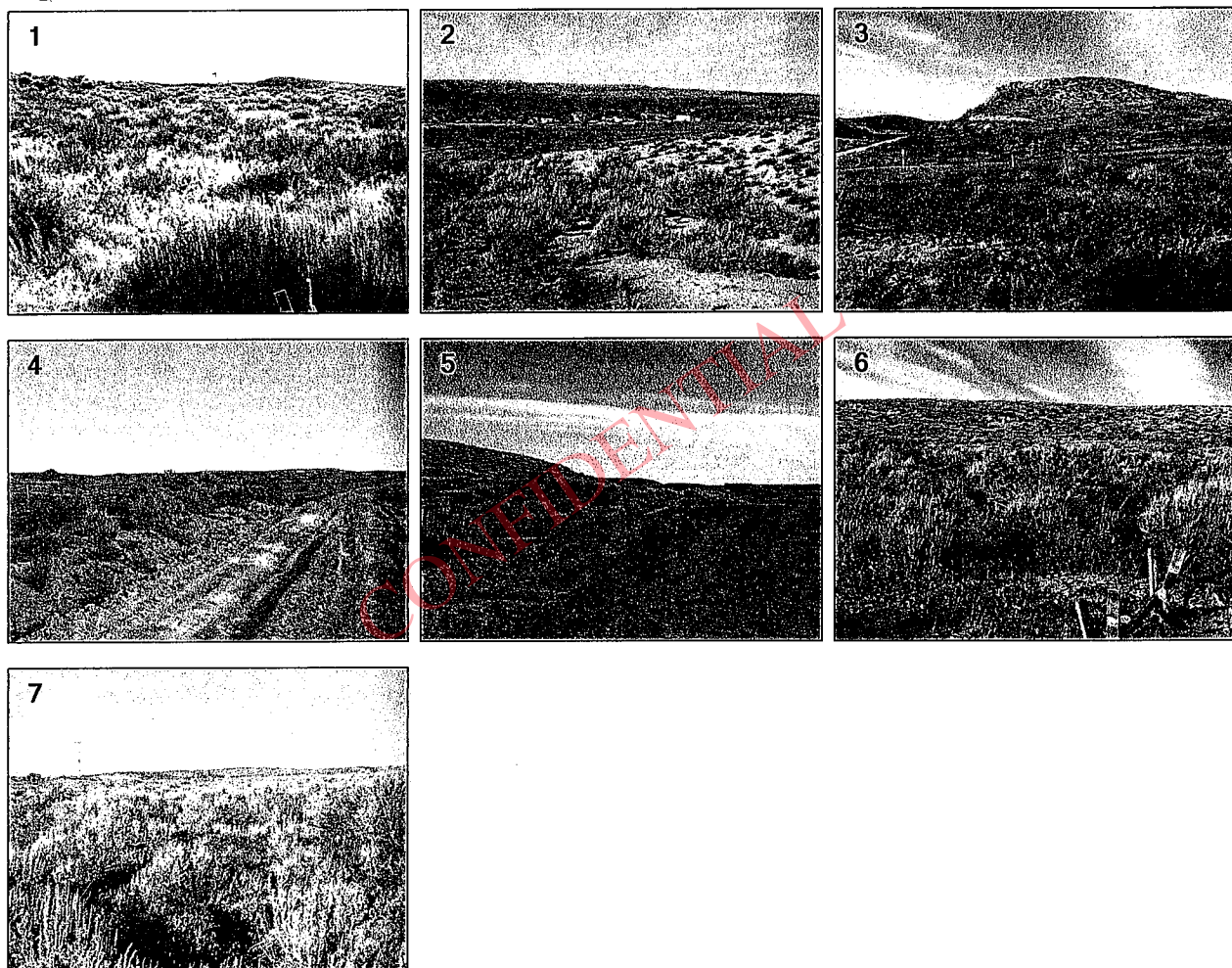


Figure 3 *continued...*



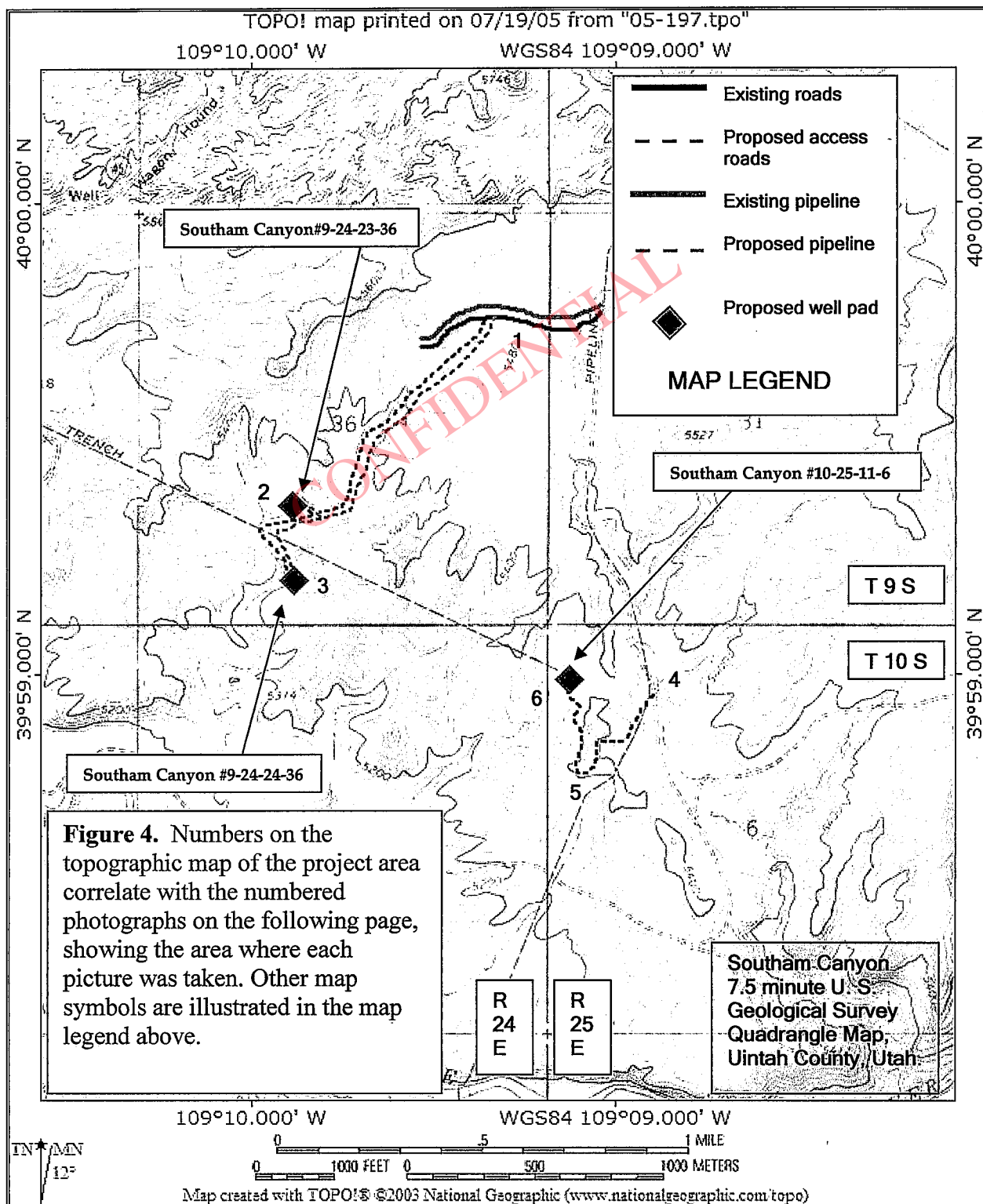
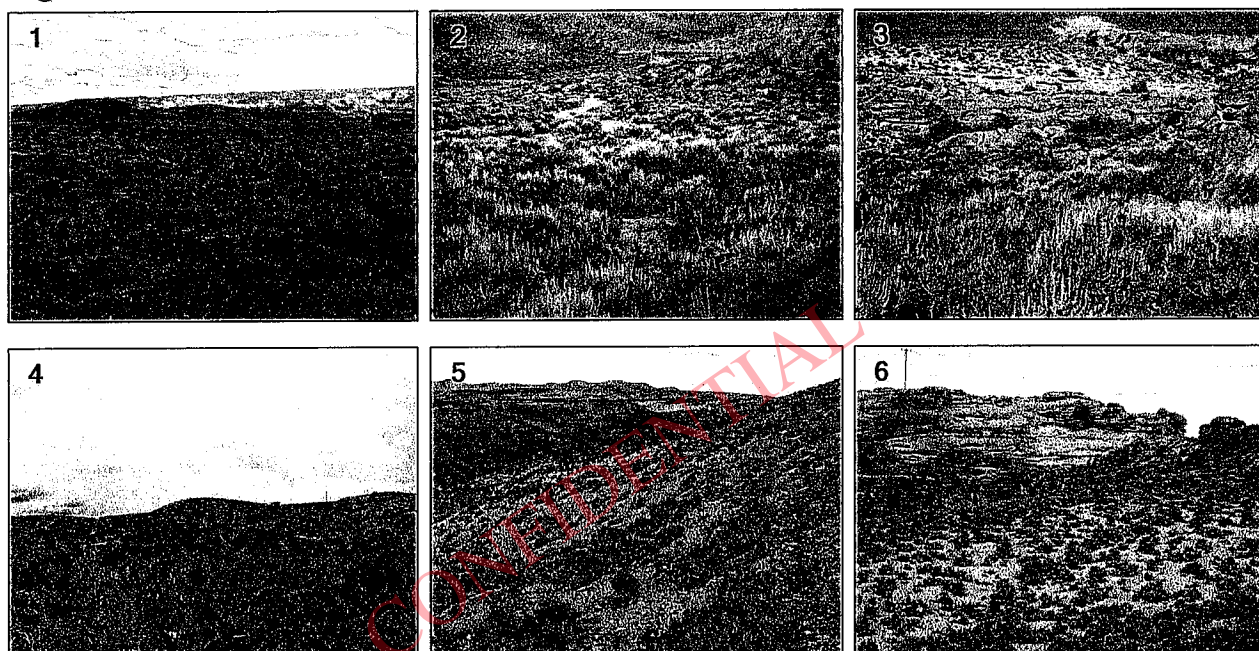


Figure 4 *continued...*



REFERENCES CITED

- Abbott, W., 1957, Tertiary of the Uinta Basin: Intermountain Assoc. Petroleum Geologists Guidebook, Eighth Ann. Field Conf., p. 102-109.
- Anderson, D. W., and Picard, M. D., 1972, Stratigraphy of the Duchesne River Formation (Eocene-Oligocene?), Northern Uinta Basin, Northeastern Utah: Utah Geological and Mineralogical Survey Bulletin 97, p. 1-28.
- Betts, C. W., 1871, The Yale College Expedition of 1870: Harper's New Monthly Magazine, v. 43, p. 663-671.
- Black, C. C. and Dawson, M. R., 1966, A review of Late Eocene mammalian faunas from North America: American Journal of Science, v. 264, p. 321-349.
- Bryant, B., Naeser C. W., Marvin R. F., Mahnert H. H., 1989, Cretaceous and Paleogene sedimentary rocks and isotopic ages of Paleogene tuffs, Uinta Basin, Utah. And ages of Late Paleogene and Neogene tuffs and the beginning of rapid regional extension, eastern boundary of the Basin and Range Province near Salt Lake City, Utah: In: Evolution of sedimentary basins-Uinta and Piceance Basins. U. S. Geological Survey Bulletin 1787-J, K.
- Flynn, J. J., 1986, Correlation and geochronology of Middle Eocene strata from the western United States: Palaeogeographic, Palaeoclimatology, Palaeoecology v, 55, p. 335-406.
- Hamblin, A. H. and Miller, W. E., 1987, Paleogeography and paleoecology of the Myton Pocket, Uinta Basin, Utah (Uinta Formation-Upper Eocene): Brigham Young University Geology Studies, vol. 34, p 33-60.
- Kay, J. L., 1934, Tertiary formations of the Uinta Basin, Utah: Annals of Carnegie Museum, v. 23, p. 357-371.
- Marsell, R. E., 1964, Geomorphology of the Uinta Basin-a brief sketch: Thirteenth Annual Field Conference. Association of Petroleum Geologists, p.34-46.
- Marsh, O. C., 1871, On the geology of the eastern Uintah Mountains: American Journal of Science and Arts, v. 1, p. 1-8.
- _____, 1875a, Ancient lake basins of the Rocky Mountain Region: American Journal of Science and Arts, v. 9, p. 49-52.
- _____, 1875b, Notice of New Tertiary mammals, IV: American Journal of Science and Arts, Third Series, v. 9, p. 239-250.

- Osborn, H. F., 1895, Fossil mammals of the Uinta Beds, expedition of 1894: American Museum of Natural History Bulletin, v. 7, p. 71-106.
- , 1929, The titanotheres of ancient Wyoming, Dakota and Nebraska: Monograph of the U. S. Geological Survey, v. 55, p. 1-953.
- Peterson, O. A., 1931c, New species from the Oligocene of the Uinta: Annals of Carnegie Museum, v. 21, p. 61-78.
- Peterson, O. A. and Kay, J. L., 1931, The Upper Uinta Formation of Northeastern Utah: Annals of the Carnegie Museum, v. 20, p. 293-306.
- Prothero, D. R., 1996, Magnetic stratigraphy and biostratigraphy of the Middle Eocene Uinta Formation, Uinta Basin, Utah, in Prothero, D. R., and Emry, R. J. editors, The terrestrial Eocene-Oligocene transition in North America, p. 3-24.
- Rasmussen, D. T., Conroy, G. C., Friscia, A. R., Townsend, K. E. and Kinkel, M. D., 1999, Mammals of the Middle Eocene Uinta Formation: Vertebrate Paleontology of Utah, p. 401-420.
- Riggs, E. S., 1912. New or little known titanotheres from the Lower Uintah Formations: Field Museum of Natural History Geological Series, v, 159, p.17-41.
- Ryder, R. T., Fouch, T. D., Elison, J. H., 1976, Early Tertiary sedimentation in the western Uinta Basin, Utah: Geological Society of America Bulletin v. 87, p. 496-512.
- Scott, W. B., 1945, The mammalia of the Duchesne River Oligocene: Transactions of the American Philosophical Society, v. 34, p. 209-253.
- Stucky, R. K., 1992, Mammalian faunas in North America of Bridgerian to Early Arikareean "Age" (Eocene and Oligocene), in Prothero, D. R., and Berggren, W. A., eds., Eocene-Oligocene Climatic and Biotic Evolution: Princeton University Press, p. 464-493.
- Wood, H. E., 1934, Revision of the Hyrachyidae: American Museum of Natural History Bulletin, v. 67, p. 181-295.
- and others, 1941, Nomenclature and correlation of the North America Continental Tertiary: Geol. Soc. Amer. Bull., v. 52, no. 1, Jan. 1, p. 1-48.

CULTURAL RESOURCE INVENTORY FOR
ENDURING RESOURCES' FIVE PROPOSED
WELL LOCATIONS ON BITTER CREEK,
(ARCHY BENCH 11-22-11-2, 11-22-12-2,
11-22-13-2, 11-22-14-2, AND 11-22-24-2)
IN T 11S, R22E, SEC. 2
UINTAH COUNTY, UTAH

CONFIDENTIAL

CULTURAL RESOURCE INVENTORY FOR
ENDURING RESOURCES' FIVE PROPOSED
WELL LOCATIONS ON BITTER CREEK,
(ARCHY BENCH 11-22-11-2, 11-22-12-2,
11-22-13-2, 11-22-14-2, AND 11-22-24-2)
IN T 11S, R22E, SEC. 2
UINTAH COUNTY, UTAH

By:

Todd B. Seacat
and
Kate Freudenberg

Prepared For:

Bureau of Land Management
Vernal Field Office

Prepared Under Contract With:

Enduring Resources, LLC
475 17th Street, Suite 1500
Denver, Colorado 80202

Prepared By:

Montgomery Archaeological Consultants
P.O. Box 147
Moab, Utah 84532

MOAC Report No. 05-196

27 June 2005

United States Department of Interior (FLPMA)
Permit No. 05-UT-60122

State of Utah Antiquities Project (Survey)
Permit No. U-05-MQ-0614b

ABSTRACT

In June 2005, a cultural resource inventory was conducted by Montgomery Archaeological Consultants Inc. (MOAC) for Enduring Resources' proposed five Archy Bench wells and pipeline corridors: Archy Bench 11-22-11-2, 11-22-12-2, 11-22-13-2, 11-22-14-2, and 11-22-24-2. The project area occurs along Bitter Creek road west of Archy Bench. The legal description for the project area is Township 11 South, Range 22 East, Section 2. A total of 59.7 acres were surveyed, all of which occurred on BLM land.

The cultural resource inventory resulted in locating one prehistoric site with a historic component (42Un4826) which is eligible for the National Register of Historic Places. Three other historic sites (42Un4827, 42Un4828, and 42Un4829) were located and are not eligible for the National Register of Historic Places.

In summary, the inspection of Enduring Resources' proposed five Archy Bench wells and pipeline corridors resulted in the documentation of four archaeological sites (42Un4826, 42Un4827, 42Un4828, and 42Un4829). Site 42Un4826 is considered eligible to the NRHP and should be avoided by the undertaking. To facilitate avoidance during the construction activities, it is recommended that a temporary fence be erected at the sites' boundary. In addition, the construction of Archy Bench 11-22-11-2 well location should be monitored by a qualified archaeologist. Based on these avoidance procedures, a recommendation of "no historic properties affected" pursuant to Section 106, CFR 800 is proposed for this project.

TABLE OF CONTENTS

ABSTRACT	i
TABLE OF CONTENTS	ii
INTRODUCTION	1
DESCRIPTION OF PROJECT AREA	2
Environmental Setting	2
Cultural Overview	2
SURVEY METHODOLOGY	7
INVENTORY RESULTS	7
Archaeological Sites	7
NATIONAL REGISTER OF HISTORIC PLACES EVALUATION	9
MANAGEMENT RECOMMENDATIONS	9
REFERENCES CITED	10
APPENDIX A: INTERMOUNTAIN ANTIQUITIES COMPUTER SYSTEM (IMACS) SITE FORMS	12

LIST OF FIGURE

1. Inventory Area of Enduring Resources' Proposed Archy Bench Five Well Locations and Pipeline Corridor on Bitter Creek in Uintah County, Utah. 3

LIST OF TABLE

1. Enduring Resources' Proposed Five Archy Bench Wells and Pipeline Corridors on Bitter Creek. 2

INTRODUCTION

A cultural resource inventory was conducted by Montgomery Archaeological Consultants Inc. (MOAC) in June 2005 for Enduring Resources' five proposed well locations. The well locations are designated: Archy Bench 11-22-11-2, 11-22-12-2, 11-22-13-2, 11-22-14-2 and 11-22-24-2. The project area occurs in the Archy Bench area on Bitter Creek, south of Vernal, Utah. The survey was implemented at the request of Ms. Phyllis Sobotik, Enduring Resources, LLC, Denver, Colorado. A total of 59.7 acres was inventoried for cultural resources on public land administered by the Bureau of Land Management (BLM), Vernal Field Office.

The objective of the inventory was to locate, document, and evaluate any cultural resources within the project area in order to comply with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventory was implemented to attain compliance with a number of federal and state mandates, including the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and Utah State Antiquities Act of 1973 (amended 1990).

The fieldwork was performed on between June 11 and 13, 2005 by Todd B. Seacat (Project Archaeologist) and directed by Keith R. Montgomery (Principal Investigator) under the auspices of U.S.D.I. (FLPMA) Permit No. 05-UT-60122 and State of Utah Antiquities Permit (Survey) No. U-05-MQ-0614b issued to MOAC.

A file search was conducted by Marty Thomas of the Utah Division of State Historic Antiquities Section on June 15, 2005. The file search revealed that several previous inventories have been completed in the vicinity of the present project area. In 1980, Gordon and Kranzush Consultants inventoried a Natural Gas Pipeline Company corridor revealing no archaeological sites (Gordon 1980). Again in 1980 this company surveyed a proposed pipeline in the area and located no cultural resources (Gordon 1980). In 1984, Western Wyoming College conducted an inventory for the Natural Gas Pipeline Company; no cultural resources were found (Creasman, 1984). In 2002, Montgomery Archaeological Consultants (MOAC) completed a cultural resource inventory under contract with Buys and Associates for the Veritas DGC Land, Inc. Uintah Seismic Project. Of the 75 archaeological sites found or revisited, none lie near the current project area (Elkins and Montgomery 2002, U-02-MQ-0243b,p,s). This project identified 19 projects previously completed near the project area; however, no previously recorded sites were identified. In 2004, MOAC completed a cultural resource inventory of the proposed Seep Ridge West Expansion pipeline corridor for Miller, Dyer & Co. (Drake 2004) which resulted in the identification of three previously recorded sites (42Un2383, 42Un2570 and 42Un2761) and four new archaeological sites (42Un4387 through 42Un4390). None of the sites are near the current project area. In summary, while several projects have been completed near the project area, there are no previously recorded sites within the area.

DESCRIPTION OF PROJECT AREA

Enduring Resources' proposed five Archy Bench wells with associated access/pipeline corridors is situated on Bitter Creek, Uintah County, Utah. The legal description is Township 11 South, Range 22 E, Section 2 (Figure 1).

Table 1: Enduring Resources' Proposed Five Archy Bench Wells and Pipeline Corridors on Bitter Creek.

Well Location	Legal Locations	Pipeline	Cultural Resources
Archy Bench 11-22-11-2	NW, NW Sec. 2 T11S, R22E	Pipeline: 1,400 ft.	42Un4826 42Un4827 42Un4828
Archy Bench 11-22-12-2	SW, NW Sec. 2 T11S, R22E	Pipeline: 1,050 ft.	None
Archy Bench 11-22-13-2	NW, SW Sec. 2 T11S, R22E	Pipeline: 420 ft.	42Un4829
Archy Bench 11-22-14-2	SW, SW Sec. 2 T11S, R22E	Pipeline: 940 ft.	None
Archy Bench 11-22-24-2	SE, SW Sec. 2 T11S, R22E	None	None

Environment

The study area lies within the Uinta Basin physiographic unit, a distinctly bowl-shaped geologic structure (Stokes 1986:231). The Uinta Basin ecosystem is within the Green River drainage, considered to be the northernmost extension of the Colorado Plateau. The geology is comprised of Tertiary age deposits which include Paleocene age deposits, and Eocene age fluvial and lacustrine sedimentary rocks. The Uinta Formation, which is predominate in the project area, occurs as eroded outcrops formed by fluvial deposited, stream laid interbedded sandstone and mudstone, and is known for its prolific paleontological localities.

Specifically, the project area is situated in the ephemeral drainage area between Cottonwood Wash and Willow Creek. Surface geology consists of hard pan residual soil armored with shale and sandstone pebbles. The elevation ranges between 5700 ft and 5900 ft a.s.l. The project occurs within the Upper Sonoran Desert Shrub Association which includes sagebrush, shadscale, greasewood, mat saltbush, snakeweed, rabbitbrush, prickly pear cactus, Indian ricegrass and other grasses. Modern disturbances include roads and oil/gas development.

Cultural Overview

The cultural-chronological sequence represented in the area includes the Paleoindian, Archaic, Fremont, Protohistoric, and Euro-American stages. The earliest inhabitants of the region are representative of the Paleoindian stage (ca. 12,000-8,000 B.P.), characterized by the adaptation to terminal Pleistocene environments and by the exploitation of big game fauna. The presence of Paleoindian hunters in the Uinta Basin region is implied by the discovery of Clovis and Folsom fluted points (ca.12,000 B.P. - 10,000 B.P.), as well as the more recent Plano Complex lanceolate points (ca. 10,000 B.P. - 7,000 B.P.). Near the project area, a variety of Plano Complex Paleoindian projectile points have been documented, including Goshen, Alberta, and Midland styles

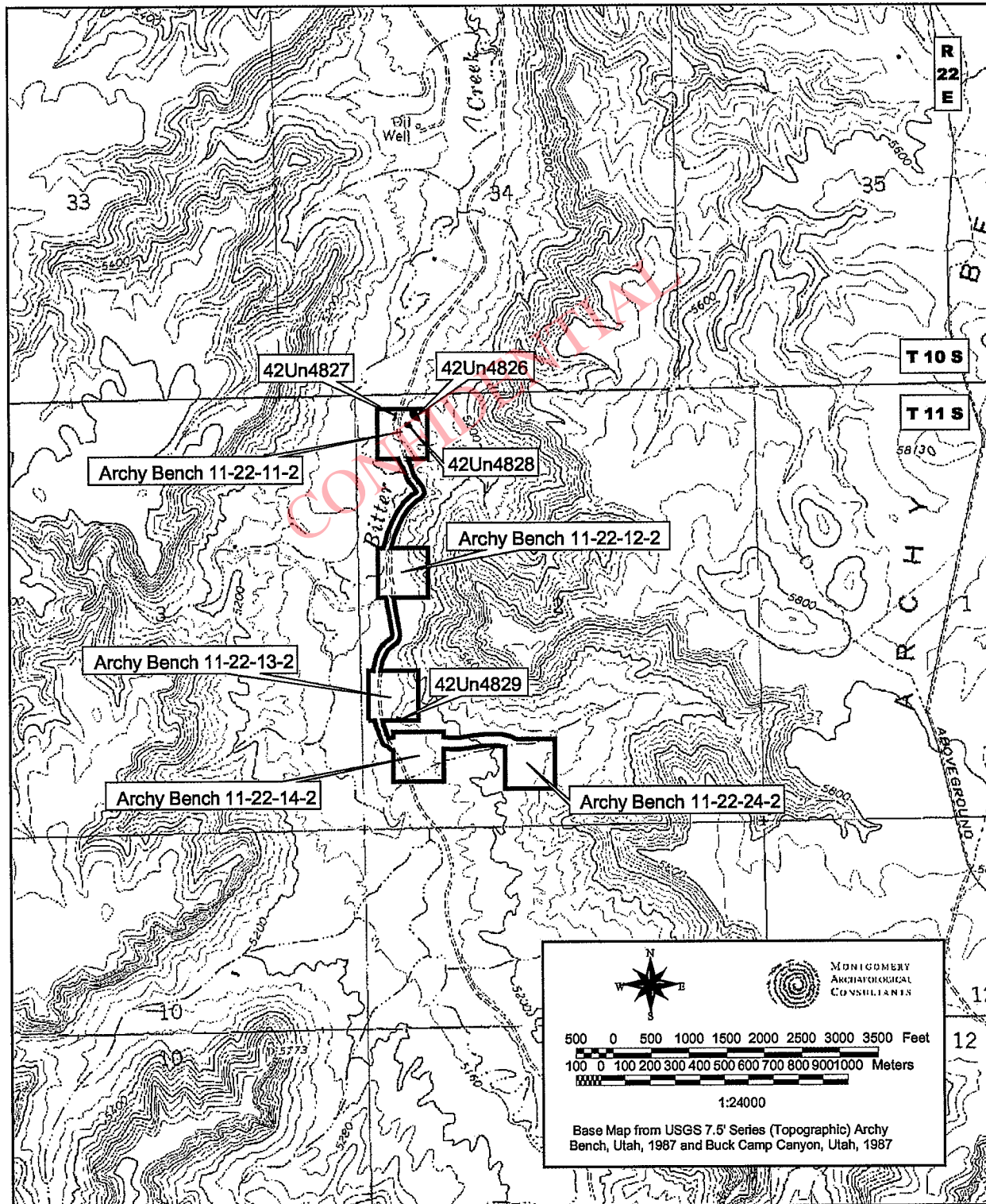


Figure 1. Inventory Area of Enduring Resources' Proposed Five Archy Bench Well Locations and Pipeline Corridor on Bitter Creek in Uintah County, Utah.

(Hauck 1998). No sites with evidence of Folsom lithic technology have previously been documented near the project area. Spangler (1995:332) reports that there are no sealed cultural deposits in association with extinct fauna or with chronologically distinct Paleoindian artifacts in Utah. Specifically in the Uinta Basin, few Paleoindian sites have been adequately documented, and most evidence of Paleoindian exploitation of the area is restricted to isolated projectile points recovered in nonstratigraphic contexts. Copeland and Fike (1998:21) argue that many areas in Utah are conducive to the herding behavior of megafauna, and that there is a high probability that many of the sites in Utah of unknown age are Paleoindian.

The Archaic stage (ca. 8,000 B.P.-1,500 B.P.) is characterized by the dependence on a foraging subsistence, with peoples seasonally exploiting a wide spectrum of plant and animal species in different ecozones. The shift to an Archaic lifeway was marked by the appearance of new projectile point types, and the development of the atlatl, perhaps in response to a need to pursue smaller and faster game (Holmer 1986). In the Uinta Basin, evidence of Early Archaic presence is relatively sparse compared to the subsequent Middle and Late Archaic periods. Early Archaic (ca. 6000-3000 B.C.) sites in the Basin include sand dune sites and rockshelters primarily clustered in the lower White River drainage (Spangler 1995:373). Early Archaic projectile points recovered from Uinta Basin contexts include Pinto Series, Humboldt, Elko Series, Northern Side-notched, Hawken Side-notched, Sudden Side-notched and Rocker Base Side-notched points. Excavated sites in the area with Early Archaic components include Deluge Shelter in Dinosaur National Monument, and open campsites along the Green River and on the Diamond Mountain Plateau (Spangler 1995:374). The Middle Archaic (ca. 3000-500 B.C.) is characterized by improved climatic conditions and an increase in human population on the northern Colorado Plateau. Several stratified Middle Archaic sites have been excavated and dozens of sites have been documented in the Uinta Basin. Middle Archaic sites in the area reflect cultural influences from the Plains, although a Great Basin and/or northern Colorado Plateau influence is represented in the continuation of the Elko Series projectile points. Subsistence data from Middle Archaic components indicate gathering and processing of plants as well as faunal exploitation (e.g., mule deer, antelope, bighorn sheep, cottontail rabbit, muskrat, prairie dog, beaver and birds). The Late Archaic period (ca. 500 B.C.-A.D. 550) in the Uinta Basin is distinguished by the continuation of Elko Series projectile points with the addition of semi-subterranean residential structures at base camps. By about A.D. 100, maize horticulture and Rose Springs arrow points had been added to the Archaic lifeway. In the Uinta Basin, the earliest evidence of Late Archaic architecture occurs at the Cockleburr Wash Site (42Un1476) where a temporary structure, probably a brush shelter, yielded a date of 316 B.C. (Tucker 1986). The structure was probably associated with seasonal procurement of wild floral resources gathered along Cliff Creek.

The Formative stage (A.D. 500-1300) is recognized in the area as the Uinta Fremont as first defined by Marwitt (1970). This stage is characterized by a reliance upon domesticated corn and squash, increasing sedentism, and in its later periods, substantial habitation structures, pottery, and bow and arrow weapon technology. Based on the evidence from Caldwell Village, Boundary Village, Deluge Shelter, Mantles Cave and others, the temporal range of the Uinta Fremont appears to be from A.D. 650 to 950. This variant is characterized by shallow, saucer-shaped pithouse structures with randomly placed postholes and off-center firepits, some of which were adobe-rimmed. Traits considered unique or predominate to the Uinta Basin include calcite-tempered pottery, two-handled wide-mouth vessels, Utah type metates, the use of gilsonite for pottery repair, settlement on tops of buttes and large-shouldered bifaces (Shields 1970).

Archaeological evidence suggests that Numic peoples appeared in east-central Utah at approximately A.D. 1100 or shortly before the disappearance of Formative-stage peoples (Reed 1994). The archaeological remains of Numic-speaking Utes consist primarily of lithic scatters with low quantities of brown ware ceramics, rock art, and occasional wickiups. The brown ware ceramics appear to be the most reliable indicator of cultural affiliation, as Desert Side-notched and Cottonwood Triangular points were manufactured by other cultural groups beside the Ute (Horn, Reed, and Chandler 1994:130). The Ute appear to have been hunters and gatherers who exploited various fauna and flora resources. According to macrobotanical and faunal data from dated components, deer, elk, pronghorn, bison, and small game were acquired (Reed 1994:191). Plant materials thought to have been exploited for food include goosefoot, grass seeds, pinyon nuts, juniper berries, squawbush berries and leaves, hackberry seeds and possibly saltbush seeds, knotweed, chokecherry, and chickweed (Reed 1994:191).

On May 5, 1864 Congress passed a law confirming the 1861 executive order setting up the Uintah Reservation (Burton 1996:24). This treaty provided that the Ute people give up their land in central Utah and move within one year to the Uintah Reservation without compensation for loss of land and independence. The Uinta-ats (later called Tavaputs), PahVant, Tumpanawach, and some Cumumba and Sheberetch of Utah were gathered together at the Uintah agency during the late 1860s and early 1870s to form the Uintah Band (Burton 1996:18-19). In the 1880 treaty council the White River Utes, who had participated in the Meeker Massacre, were forced to sell all their land in Colorado and were moved under armed escort to live on the Uintah Reservation (Callaway, Janetski, and Stewart 1986:339). Shortly thereafter, 361 Uncompahgre Utes were forced to sell their lands, and were relocated to the Ouray Reservation adjacent to the southern boundary of the Uintah Reservation. This area embraced a tract of land to the east and south of the Uintah Reservation below Ouray lying east of the Green River. A separate Indian Agency was established in 1881 with headquarters at Ouray which was located across the river from where the first military post, Fort Thornburgh was located. The Department of War established Fort Thornburgh along the Green River in 1881 to maintain peace between the settlers of Ashley Valley.

The infantry who participated in the relocation of the Colorado Indians ensured that the Uncompahgre and White River Utes remained on the two reservations (Burton 1996:28). In the late 1880s, gilsonite was discovered in the Uintah Basin, and Congress was persuaded to apportion 7,040 acres from the reservation so the mineral could be mined.

The earliest recorded visit by Europeans to Utah was the Dominguez-Escalante expedition, of 1776. From the early 1820s to 1845, the Uinta Basin became an important part of the expanding western fur trade. Homesteading began in 1878 with Thomas Smart, one of the first white settlers to settle east of Ouray. In 1879, about forty cowboys and several large herds of cattle wintered on the White River. The winter of 1879-1880 saw the establishment of a settlement near the White River by several pioneers and their families including Ephraim Ellsworth, the Remingtons, and the Campbells. The person most responsible for organizing a permanent homesteading movement in Ouray Valley was William H. Smart, the brother of Thomas Smart, who became president of the Wasatch LDS Stake in 1901 (Burton 1998). When the Ute reservation was opened to white homesteaders in 1905, Smart organized several exploration trips into the area that later attracted many LDS families.

Initially, livestock was the main industry of white homesteaders in Uintah County. Two factors - free grass and the availability of water - influenced men to move their cattle into the county. Most of the land in the area was part of the public domain and no territory or state could tax it. Cattle were eventually brought up east as far as the Green River and then to the surrounding mountains. Large cattle herds had been coming to Brown's Park from Texas and other eastern areas since the early 1850s. The K Ranch was a large cattle operation owned by P.R. Keiser which brought many cowboys to the area. The ranch was located on the Utah-Colorado line with property in both states. Charley Hill, who came to Ashley Valley as a trapper for the Hudson Bay Company, started a cattle company on Hill Creek and Willow Creek in the Book Cliffs (Burton 1996:109). They later moved out when the government set this section aside for the Ouray Indian Agency. Other prominent men in the cattle industry included A.C. Hatch, Dan Mosby, and James McKee. Cattle rustling became an increasingly large problem as cattle herds grew, and conflict resulted between the small and large cattle companies. In 1912, the Uintah Cattle and Horse Growers Association was organized to protect the livestock industry from thieves and to issue an authorized brand book (Ibid: 110).

The sheep industry later became part of Uintah County's economic backbone, and contributed to the decline of the cattle industry. Sheep were first introduced to the valley during the winter of 1879 when Robert Bodily brought in sixty head (Burton 1996:111). Sheep were able to survive the hard winters much better than cattle. By the mid-1890s, more than 50,000 head of sheep were in the region; and the production of wool became very important. In 1897, C.S. Carter began building shearing corrals. In 1899, 500,000 pounds of wool were shipped from the county and sold for twelve and one-half cents per pound (Ibid:111). In 1906, the Uintah Railway Company built shearing pens on the Green River to encourage the shipping of wool by train; and in 1912, pens were built at Bonanza and Dragon. Beginning in the 1940's Mexican sheep-shearing crews and Greek sheepmen from the Price and Helper areas came into the area. The Taylor Grazing Act was passed in 1934, allotting specific areas or "districts" to stockmen for livestock grazing that required permits. This act was a forerunner of the Bureau of Land Management, which was established in 1946 and eventually assumed responsibility for the administration of grazing laws on public land (Burton 1996:115).

Uintah County is also known for its natural resources. Coal, copper, iron, asphalt, shale, and especially gilsonite, were important to the mining industry. When gilsonite was discovered in the Uinta Basin in the 1880s, Congress was persuaded to apportion 7,040 acres from the Ute reservation so the mineral could be mined. This area became known as "The Strip" and later developed into the townsite of Moffat (later renamed Gusher). Gilsonite is a light-weight lustrous black hydrocarbon mineral that can easily be crushed into a black-brown powder. It can be found in commercial quantities only in the Uinta Basin. The earliest use of the mineral was in buggy paints and beer-vat linings. Today it is used in over a hundred products ranging from printing inks to explosives and automobile body sealer and radiator paint (Burton 1998:343). Mining camps also sprang up near the Colorado line in Bonanza, Dragon, and Watson starting in about 1903. Many immigrants, including Greeks and Chinese, worked in the mines. Bonanza became one of the largest and most modern functioning mining camps in the area beginning in 1921 and reached its peak in 1937. It was chosen as the Barber gilsonite company headquarters, because it was near the largest deposits of gilsonite in the area. Miners from Dragon, Rainbow, and other neighboring communities were relocated to Bonanza.

SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. At the proposed well location, a ten acre area centered on the center stake of the location was surveyed by the archaeologist walking parallel transects spaced no more than 10 m (30 ft) apart. The pipeline corridor was 100 ft wide, surveyed by walking parallel transects along the staked centerline, spaced no more than 10 m (30 ft) apart. Ground visibility was considered to be good. A total of 59.7 acres was inventoried for cultural resources on public land administered by the Bureau of Land Management (BLM), Vernal Field Office.

INVENTORY RESULTS

The inventory of Enduring Resources' five proposed well locations with associated access/ and pipeline corridors resulted in the documentation of four new archaeological sites (42Un4826, 42Un4827, 42Un4828, and 42Un4829).

Smithsonian Site No.: 42Un4826
Temporary Site No.: 05-196-01
Legal Description: NE/NW/NW of Sec. 2, T11S, R22E
NRHP Eligibility: Eligible, Criterion D

Description: This is a prehistoric and historic component site associated with a small rockshelter and seep spring. The site is situated at the base of an east-west trending sandstone cliff on the east side of Bitter Creek Canyon. The prehistoric component is comprised of lithic artifacts and a small petroglyph panel. The historic component consists of a light trash scatter, historic graffiti, and a dry-laid masonry sheep enclosure.

Prehistoric cultural material consists of a late stage biface fragment, seven flakes, one piece of angular debris, and one quartzite mano fragment. Tool stone is dominated by chert/chalcedony with one piece of igneous rock. Debitage consists of tertiary and secondary flakes which suggests that latter stages of tool manufacture were occurring on site. One burned rock feature (Fea. B) as well as scattered fire-cracked rock indicate the presence of thermal features. This coupled with a mano fragment may indicate domestic activities such as food preparation were also occurring on site. At the northwestern edge of the site is a small petroglyph panel (Fea. A). It consists of a X motif, a anthropomorphic stick figure, a vertical line, and a horizontal line with a dot. The rock art appears to be Numic (probably Ute) based on the type of elements (Cole 1990). Finally, the rockshelter (Fea. E) which is fairly large but wet due to the seep spring may not have been inhabited although some potential midden deposits could occur around the opening.

The historic component consists of a light scatter of historic trash associated with historic inscriptions, and a dry-laid masonry enclosure. The inscriptions (Fea. D) occur on a large sandstone boulder at the southeastern end of the site and consist of the following names, initials, and dates: C. Hoel June. 17th 1912, J.P.T b/ ' 17 ", MM, T, A, KA and TOM LOPEZ 2.17 1963. Historic artifacts include amethyst bottle glass, aqua bottle glass, clear bottle glass, four external friction Prince Albert tobacco tins, 11 open top cans, five hole-in-top milk cans, a lard pail, a meat can, galvanized sheet metal, yellow glazed earthenware sherds, porcelain sherds, and one shoe sole. Diagnostic materials consist of amethyst glass (pre-1920), aqua glass (pre-1930), a type 9 evaporated milk can (ca. 1915-1930), an AHK bottle trademark (post-1944) and an ABGM Co. bottle trademark (1886-1928). The masonry wall or enclosure (Fea. C) consists of stacked tabular sandstone about three to four tier high and incorporating in-place sandstone boulders to make an area about 3 x 3 m square. This "structure" is interpreted as a lambing pen.

Smithsonian Site No.: 42Un4827
Temporary Site No.: 05-196-02
Legal Description: NW/NW/NW of Sec. 2, T11S, R22E
NRHP Eligibility: Not Eligible

Description: This is a small historic trash scatter located on a bench east of Bitter Creek. Cultural materials include eight hole-in-top cans, 10 open top cans, and a galvanized metal wash basin. No features were observed. Diagnostic materials are sparse and consist of seven type 9 hole-in-top evaporated milk cans which are thought to date between 1915-1930. Therefore, it is likely this site dates to the first third of the 20th century, probably related to livestock tending or simply trash discarded along the Bitter Creek Canyon road.

Smithsonian Site No.: 42Un4828
Temporary Site No.: 05-196-03
Legal Description: NE/NW/NW of Sec. 2, T11S, R22E
NRHP Eligibility: Not Eligible

Description: This is a trash scatter situated on the canyon floor east of Bitter Creek. Cultural materials are dominated by various tin cans although a small quantity of clear glass possibly from a drinking glass was also observed. Approximately 50 tin cans are scattered across the site with perhaps 25 to 35 in a 5 x 3 m concentration near the center. These include two hole-in-cap cans (pre-1940), seven open top cans and can tops marked "Sanitary" (1904-1908), five marked with a "C" (pre-1934?), one Towle's Log Cabin syrup can (1909-1955), and a short coffee can. In addition, 10 type 9 hole-in-top milk cans (1915-1930) and one type 16 milk can (1931-1948) also occur on site. The site appears to represent two discard episodes the earliest between 1904 and 1908 and several later ones dating from 1915 to 1948. Based on the type of artifacts, the locality most likely functioned as short-term range related camps.

Smithsonian Site No.: 42Un4829
Temporary Site No.: 05-196-04
Legal Description: NE/SW/SW of Sec. 2, T11S, R22E
NRHP Eligibility: Not Eligible

Description: This is a small sparse trash scatter situated on the crest and slope of a ridge along the east side of Bitter Creek. Cultural materials consist of 13 tin cans and one broken beer bottle. Tin cans include five open top food cans, four hole-in-top evaporated milk cans, one external friction, hinged lid pocket tobacco tin, a paint can, one open top juice can, and a lard can lid. Diagnostic artifacts consists of the beer bottle marked with a WF & S trademark (Wm. Franzen & Son 1900-1921) and type 9 (1915-1930) and type 19 (1930-1975) milk cans. The site probably functioned as a short-term camp related to livestock tending. Dated materials indicate the site was probably occupied in the early-middle 20th century between 1915 and 1935.

NATIONAL OF HISTORIC PLACES EVALUATION

The National Register Criteria for Evaluation of Significance and procedures for nominating cultural resources to the National Register of Historic Places (NRHP) are outlined in 36 CFR 60.4 as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, material, workmanship, feeling, and association, and that they:

- a)...are associated with events that have made a significant contribution to the broad patterns of our history; or
- b)...are associated with the lives of persons significant to our past; or
- c)...embody the distinctive characteristics of a type, period, or method of construction; or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d)...have yielded or may be likely to yield information important in prehistory or history.

The cultural resource inventory resulted in the documentation of four new archaeological sites. Only the prehistoric and historic component site (42Un4826) is recommended as eligible to the NRHP under Criteria D. The prehistoric component could address such research topics as chronology, subsistence strategies, site chronology, stone tool technology, and site function. The historic component exhibits a feature and a variety of cultural materials. There is also potential for subsurface cultural remains. Historic trash scatters 42Un4827, 42Un4828, and 42Un4829 are recommended as not eligible because they are unlikely to contribute to the history of the area. These sites lack artifact density, diversity, features, and fail to possess subsurface cultural material.

CONCLUSIONS AND RECOMMENDATIONS

The cultural resource inventory of Enduring Resources' five proposed well locations with associated pipeline/access corridors resulted in the documentation of four new archaeological sites (42Un4826, 42Un4827, 42Un4828, and 42Un4829). Site 42Un4826 is considered eligible to the NRHP and should be avoided by the undertaking. To facilitate avoidance during the construction activities, it is recommended that a temporary fence be erected at the sites' boundary. In addition, the construction of Archy Bench 11-22-11-2 well location should be monitored by a qualified archaeologist. Based on these avoidance procedures, a recommendation of "no historic properties affected" is proposed for the undertaking pursuant to Section 106, CFR 800.

REFERENCES CITED

- Burton, D.K.
1996 A History of Uintah County. Scratching the Surface. Utah Centennial County History Series. Utah State Historic Society and the Uintah County Commission.
- 1998 *Settlements of Uintah County, Digging Deeper.* Uintah County Library History Series. Uintah County Library, Vernal, Utah.
- Callaway, D., J. Janetski, and O.C. Stewart
1986 Ute. In *Great Basin*, edited by Warren L. D'Azevedo, pp. 336-367. Handbook of North American Indians, Volume II: Great Basin, edited by William C. Sturtevant, Smithsonian Institution, Washington.
- Creasman, S. D.
1984 Natural Gas Pipeline Company of America Flow Line to Serve Ensearch Lizard Creek 1-10 well (R-O-W 2907). Western Wyoming College. Report 84-WWC-77.
- Copeland, J.M and R.E. Fike
1998 Fluted Projectile Points in Utah. In *Utah Archaeology 1988*, Salt Lake City.
- Drake, D.
2004 Cultural Resource Inventory of the Seep Ridge West Expansion Pipeline, Uintah County, Utah. Montgomery Archaeological Consultants, Inc., Moab, Utah. Report No. U-04-MQ-0738i.
- Elkins, M. and K. R. Montgomery
2002 Cultural Resource Inventory of Seven Seismic Lines for the Veritas Uintah Seismic Project, Uintah County, Utah. Montgomery Archaeological Consultants, Inc., Moab, Utah. Report No. U-02-MQ-0243b,p,s.
- Gordon, Kranzush
1980 Natural Gas Pipeline Company of America Ensearch Exploration, Inc. Bitter Creek Fed. #1-3, Well Tie-in-Utah. Gordon & Kranzush. Report # U-80-GA-0476b.
- Gordon, Kranzush
1980 Natural Gas Pipeline Company of America Ensearch Exploration, Inc. Bitter Creek Fed. #1-3, Well Tie-in-Reroute. Gordon & Kranzush. Report # U-80-GE-0498b.
- Hauck, F.R.
1998 Cultural Resource Evaluation of Various Large Tracts in the Wells Draw to Pariette Bench Locality in Duchesne and Uintah Counties, Utah. Archeological-Environmental Research Corporation, Bountiful, Utah. Report No. U-98-AF-0164b,s, available at the BLM Vernal Field Office, Vernal Utah.
- Horn, J.C., A.D. Reed, and S.M. Chandler
1994 Grand Resource Area Class I Cultural Resource Inventory. Alpine Archaeological Consultants, Inc. Montrose. Bureau of Land Management, Moab, Utah.
- Marwitt, J.P.
1970 Median Village and Fremont Culture Regional Variation. *University of Utah Anthropological Papers* No. 95. Salt Lake City.

- Reed A.D.
1994 The Numic Occupation of Western Colorado and Eastern Utah during the Prehistoric and Protohistoric Periods. In *Across the West: Human Population Movement and the Expansion of the Numa*, edited by D.B. Madsen and D. Rhode, pp. 188-199. University of Utah Press, Salt Lake City.
- Remington, N.C.
1959 A History of the Gilsonite Industry. Unpublished Master's These submitted to the Department of History, University of Utah.
- Shields, W.F.
1970 The Fremont Culture in the Uinta Basin. Paper presented at the Fremont Culture Symposium, 35th Annual Meeting of the Society for American Archaeology, Mexico City.
- Spangler, J.D.
1995 *Paradigms and Perspectives: A Class I Overview of Cultural Resources in the Uinta Basin and Tavaputs Plateau.*
- Stokes, W.L.
1986 *Geology of Utah.* Utah Museum of Natural History and Utah Geological and Mineral Survey, Salt Lake City.
- Tucker, G.C. Jr.
1986 Results of Archaeological Investigations Along the Chevron CO-2/PO-4 Pipelines in Northeastern Utah and Northwestern Colorado. Manuscript on file, Bureau of Land Management, Vernal, Utah.

APPENDIX A:

INTERMOUNTAIN ANTIQUITY COMPUTER SYSTEM (IMACS)
SITE INVENTORY FORMS

On File At:

Bureau of Land Management
Vernal Field Office
and
Division of State History
Salt Lake City, UT

Montgomery Archaeological Consultants, Inc.

310 East 100 South
PO Box 147
Moab, UT 84532

Invoice

DATE	INVOICE #
6/30/2005	05-196

BILL TO
Enduring Resources Frank Hutto 410 17th Street, Suite 1520 Denver, CO 80202

TERMS	DUE DATE	PROJECT
Net 30	7/30/2005	T11S R22E S2 8 Wells

QUANTITY	DESCRIPTION	RATE	AMOUNT
23	Project Archaeologists-Field Work	45.00	1,035.00
2	Perdiem	80.00	160.00
499	Mileage	0.50	249.50
30	Project Archaeologists-Report Prep	45.00	1,350.00
7	Secretarial/Drafting	28.00	196.00
<i>Archy Bench</i> 11-22-11-2 - \$373.82 11-22-23-2 - 373.82 11-22-13-2 - 373.81 11-22-24-2 - 373.81 11-22-21-2 - 373.81 11-22-22-2 - 373.81			
Federal Identification Tax Number 47-090-2943 = 373.81 11-22-12-2 = 373.81 11-22-14-2 = 373.81			Total \$2,990.50

Payment is Due and Payable within 30 days. Interest will be calculated at the rate of 1.5% per month on the unpaid balance and a billing charge of \$25.00 per invoice for late payment will be assessed.

1-8-05
OK P. Sobolik



MONTGOMERY
ARCHAEOLOGICAL
CONSULTANTS

Box 147, 322 East 100 South Moab, Utah 84532 (435) 259-5764 Fax (435) 259-5608

July 2, 2005

Ms. Phyllis Sobotik
Enduring Resources, LLC
475 17th Street, Suite 1500
Denver, Colorado 80202

Dear Ms. Sobotik:

Enclosed please find two copies of the report entitled "Cultural Resource Inventory for Enduring Resources' Five Proposed Well Locations on Bitter Creek, (Archy Bench 11-22-11-2, 11-22-12-2, 11-22-13-2, 11-22-14-2, and 11-22-24-2) in T11S, R22E, Sec. 2 Uintah County, Utah." The cultural resource inventory resulted in the documentation of one prehistoric/historic site 42Un4826, which is eligible for the National Register of Historic Places. Three historic sites (42Un4827, 42Un4828, and 42Un4829) were located and are recommended not eligible for the National Register of Historic Places. Based on the findings, we recommend that site 42Un4826 should be avoided by the undertaking. To facilitate avoidance during the construction activities, it is recommended that a temporary fence be erected at the sites' boundary. In addition, the construction of Archy Bench 11-22-11-2 well location should be monitored by a qualified archaeologist. Based on these avoidance procedures, a recommendation of "no historic properties affected" is proposed for the undertaking pursuant to Section 106, CFR 800.

If you have any questions, please call me. We appreciate this opportunity to provide archaeological consulting services.

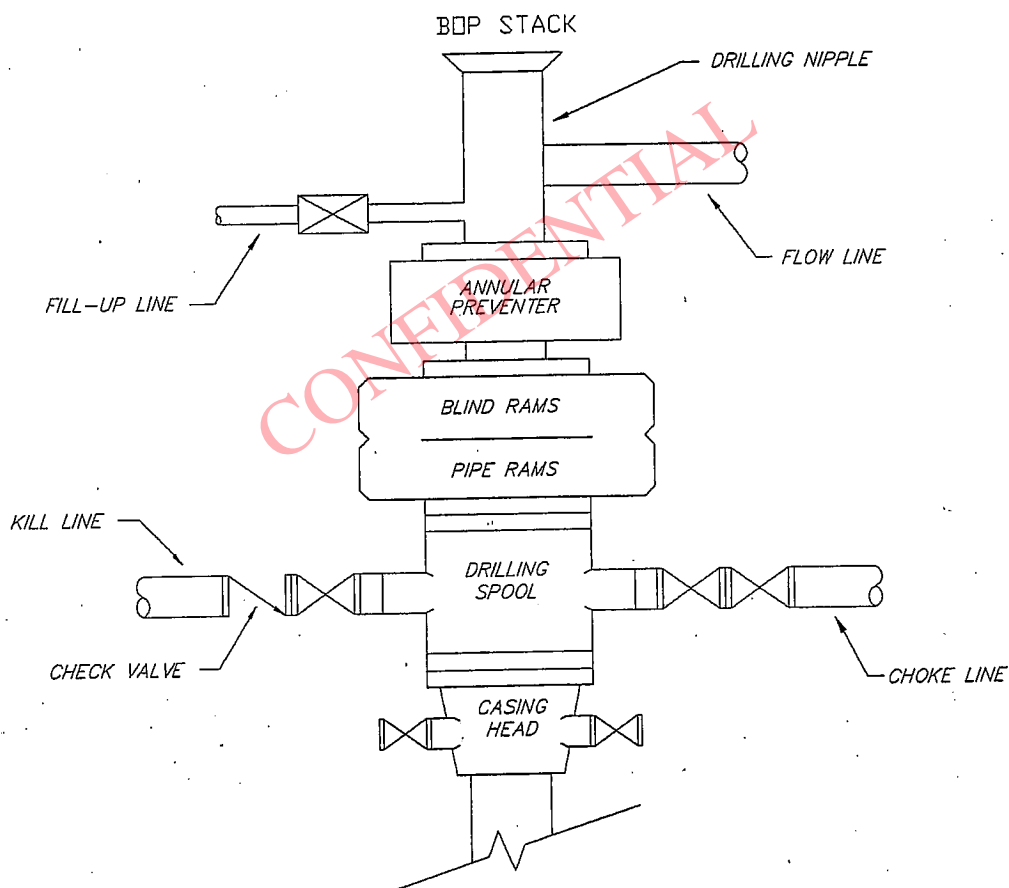
Sincerely,

Keith Montgomery
Keith R. Montgomery
Principal Investigator

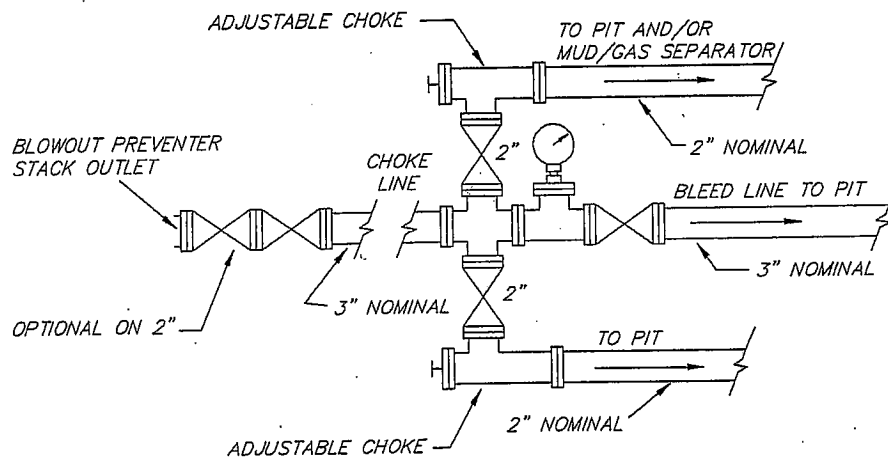
cc: Mr. H. Blaine Phillips, Archaeologist, BLM, Vernal Field Office

ENDURING RESOURCES, LLC

TYPICAL 3,000 p.s.i. BLOWOUT PREVENTER SCHEMATIC



TYPICAL 3,000 p.s.i. CHOKE MANIFOLD SCHEMATIC



ENDURING RESOURCES, LLC

425 Seventeenth Street, Suite 1500

Denver, Colorado 80202

Telephone: 303-573-1222

Facsimile: 303-573-0461

October 8, 2008

State of Utah
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RE: Exception Well Locations

- a. Archy Bench 11-22-11-2 (Prior API #43-047-36790, Re-permit)
SHL – Lot 5 (NWNW) Sec 2-11S-22E
523' FNL – 638' FWL
 - b. Archy Bench 11-22-21-2, directional well (Prior API #43-047- 36787, Re-permit)
SHL = Lot 5 (NWNW) Sec 2-11S-22E
543' FNL – 641' FWL
BHL = Lot 6 (NENW)Sec 2-11S-22E
1,153' FNL – 1,980' FWL
- ALL in Uintah County, Utah**

Ladies and Gentlemen:

- 1. The surface locations for these wells are located in a non-typical qtr/qtr section (but are at least 460' from any lease line, and
- 2. The surface locations for these wells are located only 20' apart on this a multi-well pad.

Enduring Resources, LLC is the only leasehold interest owner in the W/2 of Section 2, T11S-R22E, and within 460 feet of any part of the above-referenced proposed wells' well bores, therefore,

- A. *ERC grants itself permission for these exception well locations, and*
- B. *ERC grants itself permission for two well bores to be located next to each other on a multi-well pad.*

Should you have any questions concerning this matter, please do not hesitate to call (303) -350-5114.

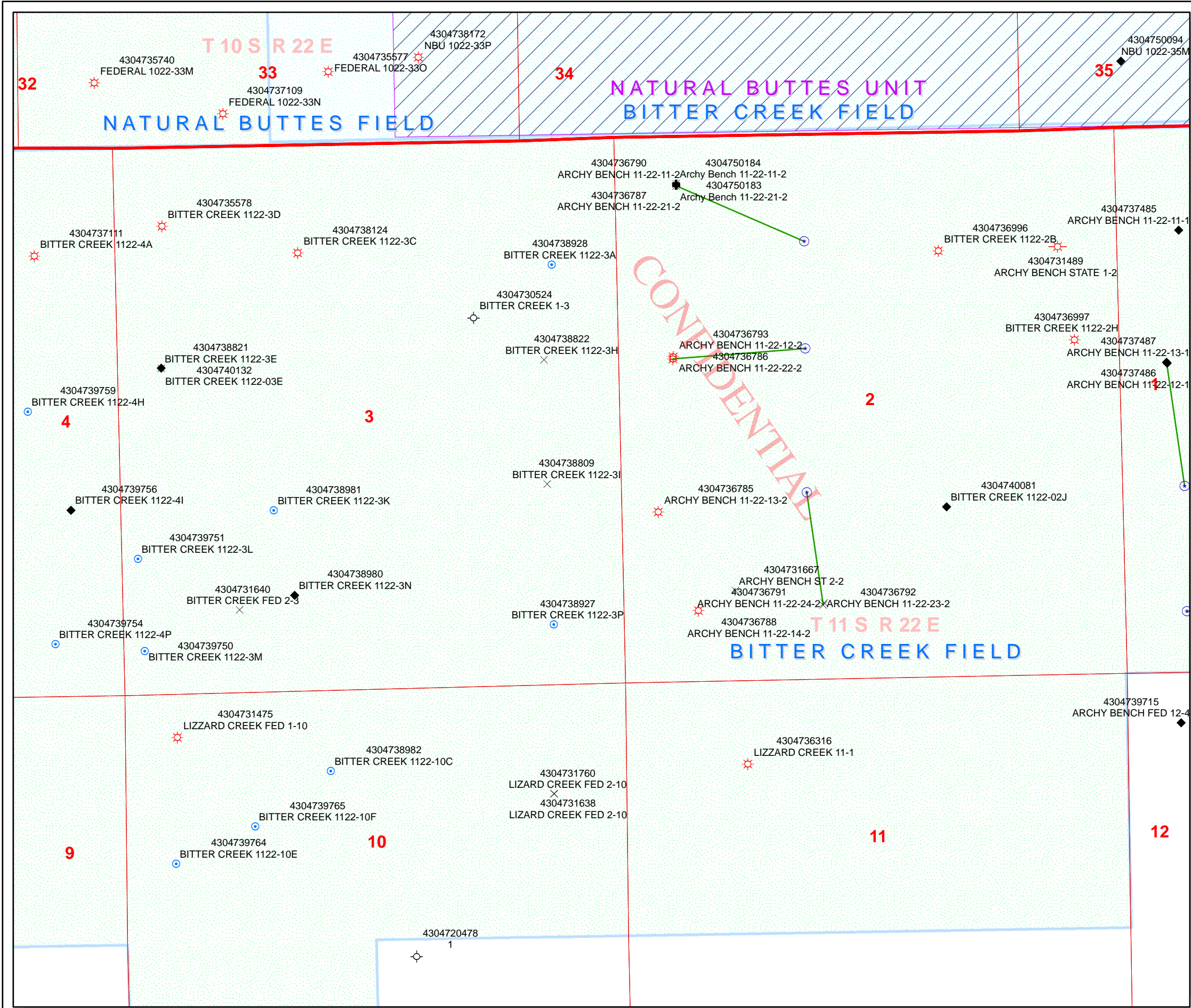
Very truly yours,

ENDURING RESOURCES, LLC



Alvin R. (Al) Arlian
Landman – Regulatory Specialist

ara/



API Number: 4304750184
Well Name: Archy Bench 11-22-11-2
Township 11.0 S Range 22.0 E Section 2
Meridian: SLBM
Operator: ENDURING RESOURCES, LLC

Map Prepared:
Map Produced by Diana Mason

Units

STATUS

ACTIVE

EXPLORATORY

GAS STORAGE

NF PP OIL

NF SECONDARY

PI OIL

PP GAS

PP GEOTHERML

PP OIL

SECONDARY

TERMINATED

Fields

STATUS

ACTIVE

COMBINED

Sections

Township

Wells Query Events

<all other values>

GIS_STAT_TYPE

<Null>

APD

DRL

GI

GS

LA

NEW

OPS

PA

PGW

POW

RET

SGW

SOW

TA

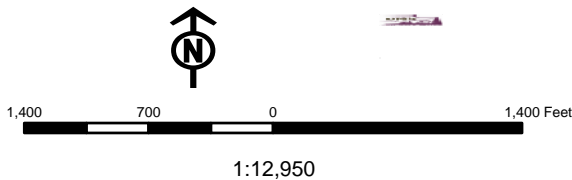
TW

WD

WI

WS

Bottom Hole Location



'APIWellNo:43047501840000'

Well Name	Enduring Resources, LLC Archy Bench 11-22-11-2 43047501840000			
String	Cond	Surf	Prod	
Casing Size(in)	14.000	8.625	4.500	
Setting Depth (TVD)	40	2000	7750	
Previous Shoe Setting Depth (TVD)	0	40	2000	
Max Mud Weight (ppg)	8.4	8.4	9.8	
BOPE Proposed (psi)	0	500	3000	
Casing Internal Yield (psi)	500	2950	7780	
Operators Max Anticipated Pressure (psi)	4028		10.0	

Calculations	Cond String	14.000	"
Max BPH (psi)	.052*Setting Depth*MW=	17	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	12	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	8	NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	8	NO
Required Casing/BOPE Test Pressure=		40	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

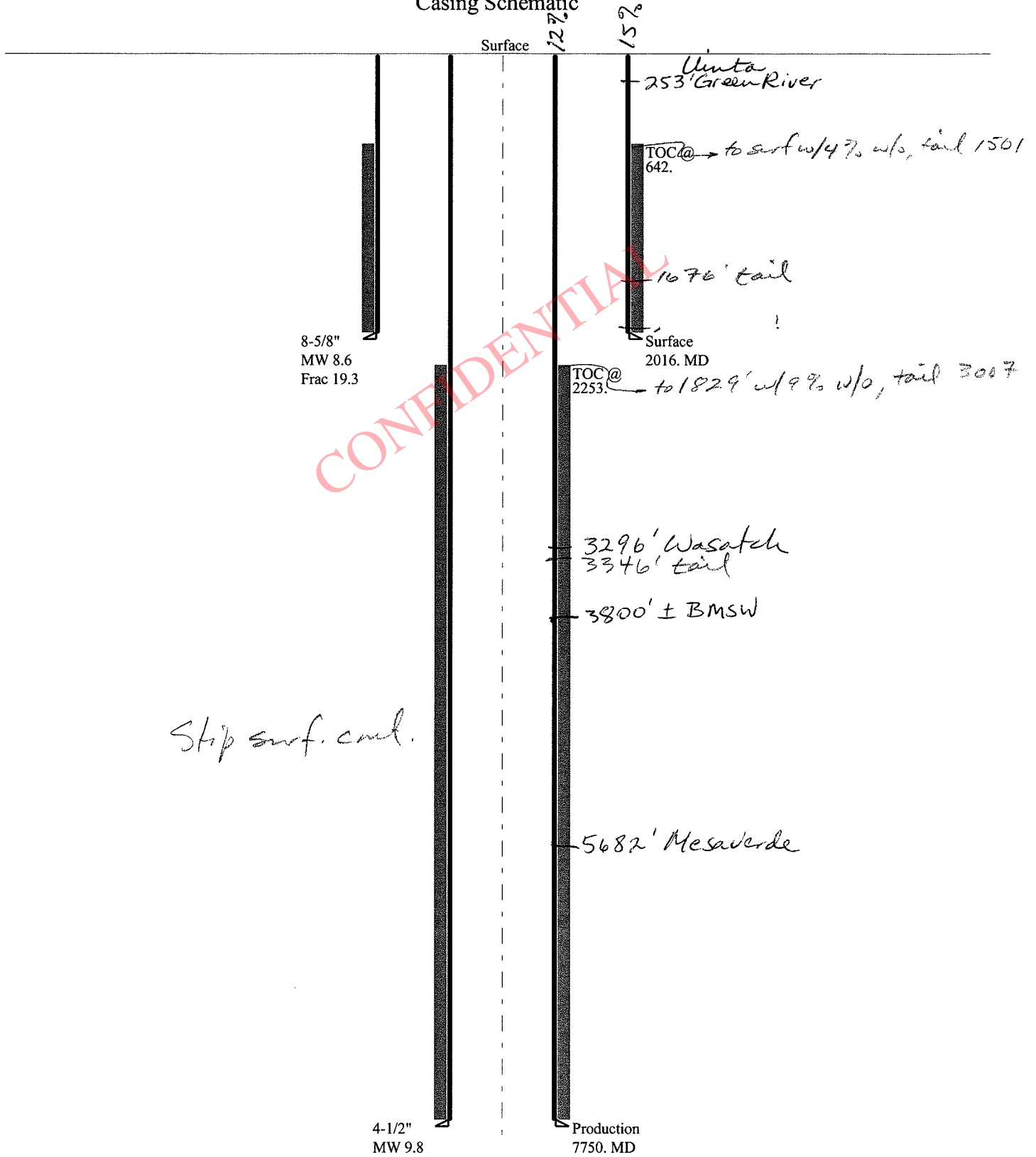
Calculations	Surf String	8.625	"
Max BPH (psi)	.052*Setting Depth*MW=	874	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	634	NO Air Drill with diverter head - o.k.
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	434	YES
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	443	NO Reasonable depth in area
Required Casing/BOPE Test Pressure=		2000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient

Calculations	Prod String	4.500	"
Max BPH (psi)	.052*Setting Depth*MW=	3949	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	3019	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	2244	YES O.K.
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	2684	NO Reasonable - See max allowed pressure.
Required Casing/BOPE Test Pressure=		3000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2000	psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BPH (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

43047501840000 Archy Bench 11-22-11-2

Casing Schematic



Well name:	43047501840000 Archy Bench 11-22-11-2	
Operator:	Enduring Resources, LLC	
String type:	Surface	Project ID: 43-047-50184-0000
Location:	Uintah County	

Design parameters:

Collapse

Mud weight: 8.600 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 103 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 266 ft

Burst:

Design factor 1.00

Cement top: 642 ft

Burst

Max anticipated surface pressure: 1,774 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,016 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 1,756 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 7,750 ft
Next mud weight: 9.800 ppg
Next setting BHP: 3,945 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,016 ft
Injection pressure: 2,016 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2016	8.625	24.00	J-55	ST&C	2016	2016	7.972	720.9
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	901	1370	1.521	2016	2950	1.46	42	244	5.79 J

Prepared by: Helen Sadik-Macdonald
Div of Oil, Gas & Minerals

Phone: 801-538-5357
FAX: 801-359-3940

Date: November 6, 2008
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2016 ft, a mud weight of 8.6 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	43047501840000 Archy Bench 11-22-11-2		
Operator:	Enduring Resources, LLC		
String type:	Production	Project ID:	43-047-50184-0000
Location:	Uintah County		

Design parameters:

Collapse

Mud weight: 9.800 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 184 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Burst:

Design factor 1.00

Cement top: 2,253 ft

Burst

Max anticipated surface pressure: 2,240 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 3,945 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Non-directional string.

Tension is based on buoyed weight.
Neutral point: 6,615 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	7750	4.5	11.60	N-80	LT&C	7750	7750	3.875	676.3
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	3945	6350	1.609	3945	7780	1.97	77	223	2.91 J

Prepared by: Helen Sadik-Macdonald
Div of Oil, Gas & Minerals

Phone: 801-538-5357
FAX: 801-359-3940

Date: November 6, 2008
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 7750 ft, a mud weight of 9.8 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Application for Permit to Drill Statement of Basis

12/30/2008

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
1111	43047501840000	LOCKED	GW	F	No
Operator	ENDURING RESOURCES, LLC		Surface Owner-APD		
Well Name	Archy Bench 11-22-11-2		Unit		
Field	BITTER CREEK		Type of Work		DRILL
Location	NWNW 2 11S 22E S 523 FNL 638 FWL GPS Coord (UTM) 634329E 4417268N				

Geologic Statement of Basis

Enduring proposes to set 2,016' of surface casing. The base of the moderately saline ground water is estimated at 3,100'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 2. The surface formation at this location is the Green River Formation. The Green River Formation is made up of interbedded limestones, shales and sandstones. Fresh water aquifers can be found in the Green River Formation and should be protected. The proposed surface casing should adequately protect any potentially useable aquifers. Production casing cement should be brought up above the base of the moderately saline ground water in order to isolate it from fresher waters uphole.

Brad Hill
APD Evaluator

12/30/2008
Date / Time

Surface Statement of Basis

The surface rights at the proposed location are owned by the Federal Government. The operator is responsible for obtaining any surface permits or rights-of-way required by the BLM.

Brad Hill
Onsite Evaluator

12/30/2008
Date / Time

Application for Permit to Drill Statement of Basis

12/30/2008

Utah Division of Oil, Gas and Mining

Page 2

Conditions of Approval / Application for Permit to Drill

Category	Condition
Surface	None.

CONFIDENTIAL



JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: Archy Bench 11-22-11-2
API Well Number: 43047501840000
Lease Number: ML-47075
Surface Owner: FEDERAL
Approval Date: 12/30/2008

Issued to:

Enduring Resources, LLC, 475 17th Street, Suite 1500, Denver, CO 80202

Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 210-04 .

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:

Administrative approval for commingling the production from the Wasatch formation and the Mesaverde formation in this well is hereby granted. Appropriate information has been submitted to DOGM in accordance with R649-3-22. No written objections from owners were received by DOGM.

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

Surface casing shall be cemented to the surface.

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to spudding the well - contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program - contact Dustin Doucet
- Prior to commencing operations to plug and abandon the well - contact Dan Jarvis

The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

- Plugging and abandonment or significant plug back of this well - contact Dustin Doucet
- Any changes to the approved drilling plan - contact Dustin Doucet

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at: (801) 538-5338 office
(801) 942-0871 home
- Carol Daniels at: (801) 538-5284 office
- Dustin Doucet at: (801) 538-5281 office
(801) 733-0983 home

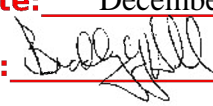
Reporting Requirements:

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

Approved By:



For Gil Hunt
Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47075
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: Enduring Resources, LLC		7. UNIT or CA AGREEMENT NAME:
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 , Denver, CO, 80202		8. WELL NAME and NUMBER: Archy Bench 11-22-11-2
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0523 FNL 0638 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 2 Township: 11.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047501840000
PHONE NUMBER: 303 350-5114 Ext		9. FIELD and POOL or WILDCAT: BITTER CREEK
COUNTY: UTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 12/30/2009 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: _____ </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Request an one-year extension to APD term.		
Approved by the Utah Division of Oil, Gas and Mining		
Date: <u>December 31, 2009</u>		
By: 		
NAME (PLEASE PRINT) Alvin Arlian	PHONE NUMBER 303 350-5114	TITLE Landman-Regulatory
SIGNATURE N/A		DATE 12/29/2009



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047501840000

API: 43047501840000

Well Name: Archy Bench 11-22-11-2

Location: 0523 FNL 0638 FWL QTR NWNW SEC 2 TWNP 110S RNG 220E MER S

Company Permit Issued to: ENDURING RESOURCES, LLC

Date Original Permit Issued: 12/30/2008

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Approved by the
Utah Division of
Oil, Gas and Mining**

Signature: Alvin Arlian

Date: 12/29/2009

Title: Landman-Regulatory **Representing:** ENDURING RESOURCES, LLC

Date: December 31, 2009

By: 

RECEIVED December 29, 2009

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47075
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: Enduring Resources, LLC		7. UNIT or CA AGREEMENT NAME:
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 , Denver, CO, 80202		8. WELL NAME and NUMBER: ARCHY BENCH 11-22-11-2
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0523 FNL 0638 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 02 Township: 11.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047501840000
PHONE NUMBER: 303 350-5114 Ext		9. FIELD and POOL or WILDCAT: BITTER CREEK
COUNTY: UTAH		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 12/30/2010 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
 Request for an one-year extension to APD termination date.

Approved by the
Utah Division of
Oil, Gas and Mining

Date: 12/30/2010

By:

NAME (PLEASE PRINT) Alvin Arlian	PHONE NUMBER 303 350-5114	TITLE Landman-Regulatory
SIGNATURE N/A		DATE 12/28/2010



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047501840000

API: 43047501840000

Well Name: ARCHY BENCH 11-22-11-2

Location: 0523 FNL 0638 FWL QTR NWNW SEC 02 TWP 110S RNG 220E MER S

Company Permit Issued to: ENDURING RESOURCES, LLC

Date Original Permit Issued: 12/30/2008

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Approved by the
Utah Division of
Oil, Gas and Mining**

Signature: Alvin Arlian

Date: 12/28/2010

Title: Landman-Regulatory **Representing:** ENDURING RESOURCES, LLC

Date: 12/30/2010

By: 

RECEIVED December 28, 2010



GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

December 27, 2011

Al Arlian
Enduring Resources, LLC
511-16th Street, Ste. 700
Denver, CO 80202

Re: APD Rescinded – Archy Bench 11-22-11-2, Sec.2 T.11S, R.22E
Uintah County, Utah API No. 43-047-50184

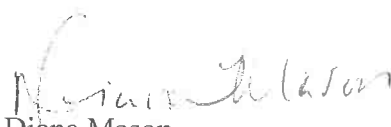
Dear Mr. Arlian:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on December 30, 2008. December 31, 2009 and December 30, 2010 the Division granted a one-year APD extension. On December 27, 2011, you requested that the APD be rescinded. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective December 27, 2011.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,


Diana Mason
Environmental Scientist

cc: Well File
Bureau of Land Management, Vernal
SITLA, Ed Bonner

